

**Attachment B: Collection of potential conditions – Northern Gateway Pipelines Inc. (Northern Gateway) – Enbridge Northern Gateway Project – Hearing Order OH-4-2011**

The following are potential conditions that could form part of any regulatory instruments that the National Energy Board may issue for the proposed Enbridge Northern Gateway Project, should the Governor in Council approve it.

In these potential conditions, the following terms are defined as:

**Oil pipeline:** The oil export pipeline located approximately between Bruderheim, Alberta and Kitimat, British Columbia, including all associated facilities to be installed along the pipeline, with the exception of Kitimat Terminal, as defined below.

**Condensate pipeline:** The condensate import pipeline located approximately between Kitimat, British Columbia, and Bruderheim, Alberta, including all associated facilities to be installed along the pipeline, with the exception of Kitimat Terminal, as defined below.

**Kitimat Terminal:** Located near Kitimat, British Columbia, Kitimat Terminal is the tank terminal, the marine terminal, and the defined undeveloped area outside of the fence line.

**Infrastructure:** All structures or sites necessary for constructing the oil pipeline, the condensate pipeline, or Kitimat Terminal. Examples of infrastructure include, but are not limited to, construction camps, stockpile sites, laydown areas, temporary work space, burrow pits, roads, bridges, snow pads, and temporary power supply lines necessary for the operation of infrastructure and construction equipment.

**Project:** The Enbridge Northern Gateway Project in its entirety, including the oil pipeline, the condensate pipeline, Kitimat Terminal, and all infrastructure.

**Construction:** Any in-field activity that may have an impact on the environment and which is necessary for installing, or preparing to install, the required infrastructure, the oil pipeline, the condensate pipeline, or Kitimat Terminal. Construction activities include, but are not limited to, clearing, mowing, grading, trenching, drilling, boring, blasting, dredging, and conducting geotechnical investigations. Construction activities do not include activities associated with normal surveying operations or data collection activities.

**Commencing operations:**

- In the case of the oil pipeline or condensate pipeline, when it is opened for the transmission of hydrocarbons; and
- In the case of Kitimat Terminal, when hydrocarbons first cross the tank terminal boundaries and enter terminal piping, or when hydrocarbons first enter marine terminal piping directly from a tanker.

**For approval:** Where a condition requires a filing for approval, Northern Gateway must not commence the indicated activity until the National Energy Board issues its approval of that filing.

**Consultation:** Unless otherwise specified in a condition, Northern Gateway's consultation must be carried out in a manner whereby it:

- a) provides, to the individual, group, or organization to be consulted:
  - i) notice of the matter in sufficient form and detail to allow that individual, group, or organization to prepare its views or information on the matter;
  - ii) a reasonable period for that individual, group, or organization to prepare those views or information; and
  - iii) an opportunity to present those views or information to Northern Gateway; and
- b) considers, fully and impartially, any views or information so presented.

**Third party:** An independent consultant, expert, or contractor that, except for receiving payment for acting as a third party, is unaffiliated with Northern Gateway, Enbridge, the principal consultants of either, or any other corporate entity with a financial interest in the Project. A third party is, because of his/her knowledge, training, and experience, qualified and competent to perform a review, but was not involved in the development of the manual, report, plan, program, or policy being assessed or reviewed.

**Monitoring:** The observation of the environmental and socio-economic effects of the Project for the purposes of assessing and measuring the effectiveness of mitigation measures undertaken, identifying unanticipated environmental and socio-economic issues, and, based on the results of these activities, determining any remedial actions required.

From an engineering perspective, monitoring involves the regular observation of pipelines and facilities (e.g., through surveys, patrols, inspections, testing, instrumentation, etc.) to ensure their operation is within defined parameters, with the goal of identifying any issues or potential concerns (e.g., pipeline integrity, geohazards, erosion, security, etc.) that may compromise the protection of the pipelines and facilities, property, persons, and the environment.

### Summary Index of Condition #'s by Project Component

The table below is intended to aid in locating conditions within the larger table that are relevant or applicable to a particular component of the Project.

Project component	Relevant condition #'s
Infrastructure	13, 16, 19, 43, 48, 54, 59, 65, 68, 71, 87, 94, 101, 105, 114, 120, 148
Oil pipeline	7, 14, 17, 20, 26, 29, 31, 33, 35, 44, 49, 55, 60, 63, 66, 69, 72, 75, 78, 80, 83, 85, 91, 95, 98, 102, 106, 109, 112, 115, 121, 124, 127, 130, 136, 142, 144, 149, 151, 153, 156, 159, 162, 170, 174, 177, 179, 187, 189, 193, 197
Condensate pipeline	8, 15, 18, 21, 27, 30, 32, 34, 36, 45, 50, 56, 61, 64, 67, 70, 73, 76, 79, 81, 84, 86, 92, 96, 99, 103, 107, 110, 113, 116, 122, 125, 128, 131, 137, 143, 145, 150, 152, 154, 157, 160, 163, 171, 175, 178, 180, 188, 190, 194, 198
Kitimat Terminal	5-6, 28, 37, 46-47, 51-52, 57, 62, 74, 77, 82, 93, 97, 100, 104, 108, 111, 117, 123, 129, 132, 134, 138, 141, 146, 155, 158, 161, 164, 172
The Project	1-4, 9-12, 22-25, 38-42, 53, 58, 88-90, 118-119, 126, 133, 135, 139-140, 147, 165-169, 173, 176, 181-186, 191-192, 195-196, 199

### A note on interpreting the conditions table

The collection of potential conditions is presented in table format in order to avoid duplicating conditions that apply to more than one component of the Project, and where separate filings may be appropriate or beneficial. Each condition is listed only once and, if applicable to a particular component, a condition number is assigned in that column. Northern Gateway would have the option to submit separate filings for each condition number within a row, or a single filing that would apply to all of the conditions in that row.

Should the Project be approved, conditions would be divided or duplicated among any certificates and orders issued, as appropriate. Similar tables may be used in those authorizations. Although conditions could be duplicated among any certificates and orders issued, single filings could serve to address these duplicated conditions, if appropriate under the circumstances, and if the company indicates this intent.

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
<b>Phase: General</b>						
1	<b>Compliance with conditions</b> Northern Gateway Pipelines Inc. (Northern Gateway) must comply with all of the conditions contained in this [certificate/order], unless the National Energy Board (NEB) otherwise directs.					1
2	<b>General engineering</b> Northern Gateway must cause the Project facilities to be designed, located, constructed, installed, and operated in accordance with, at a minimum, the specifications, standards, policies, mitigation measures, procedures, and other information included or referred to in its Project application or as otherwise committed to during the OH-4-2011 proceeding.					2
3	<b>General environment</b> Northern Gateway must implement or cause to be implemented, at a minimum, all of the policies, practices, programs, mitigation measures, recommendations, and procedures for the protection of the environment included or referred to in its Project application or as otherwise committed to during the OH-4-2011 proceeding.					3
4	<b>Group 1 designation</b> Northern Gateway shall be designated as a Group 1 company and must file <b>quarterly</b> Surveillance Reports as outlined in the Toll Information Regulations and Guide BB, Financial Surveillance Reports in the NEB's Filing Manual or any successor NEB Guideline documents. Financial information must be provided for each pipeline and audited financial statements (income, balance sheet and cash flow) must be provided for the Limited Partnership.					4
5	<b>Marine Voluntary Commitments</b> No laden oil or condensate tanker shall unload or load at Kitimat Terminal until Northern Gateway has implemented or caused to be implemented all of its voluntary commitments related to marine tanker traffic and enhanced oil spill response associated with the				5	

<sup>1</sup> a) Condition wording has been generalized so that conditions can apply to one or more Project components, as required. If a condition appears within a particular column, it applies to that component and the specific timing element (e.g. prior to commencing construction or other activity) in relation to that component.

b) Certain conditions require more than one filing at different stages of the Project lifecycle. In these cases, the conditions appear under the phase headings according to when the initial filing would be due.

<sup>2</sup> There are many infrastructure sites associated with the Project, and the number and types could evolve over time. Prior to commencing construction at a particular infrastructure site, filings for conditions in this column must address that particular site, either by being directly applicable to the site or by providing justification as to why not.

<sup>3</sup> Conditions in this column are general in nature and not linked to a particular Project component, unless specified within the condition wording itself. Conditions in this column that relate to a particular Project component appear here, and not in the individual components' columns, in those cases where their associated filings are tied to an overall Project timing element. In all instances, where a condition in this column refers to filing information "prior to commencing construction", it is referring to the first construction activity to be undertaken for the Project as a whole, regardless of the component. Where a condition in this column refers to filing information "after commencing operations", it is referring to the point when the last Project component becomes operational.

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	<p>Project (Marine Voluntary Commitments). As referenced in the Project application and other evidence, including the TERMPOL Review Committee's TERMPOL Review Process report filed on 23 February 2012, these include, but are not limited to:</p> <ul style="list-style-type: none"> <li>a) simulator training for pilots and tug crews;</li> <li>b) live field trials in the confined channel assessment area for tankers and tug escort operations simulating both laden and ballasted condition;</li> <li>c) a requirement for laden tankers in the confined channel assessment area to have two escort tugs (one tethered);</li> <li>d) a requirement for ballasted tankers to be accompanied by a close escort tug;</li> <li>e) purpose-built escort tugs available for ocean rescue;</li> <li>f) escort tugs equipped with oil pollution emergency response equipment;</li> <li>g) safe transit speeds for tankers to be identified in Northern Gateway's Port Information Book;</li> <li>h) a requirement for tankers to modify their speed to reduce the risk of marine mammal strikes;</li> <li>i) the installation of radar to monitor traffic and provide additional information to the Canadian Coast Guard's Marine Communications and Traffic Services;</li> <li>j) establishment of vessel operational safety limits that address visibility, wind, and sea conditions;</li> <li>k) establishment of terminal operational safety limits that address visibility, wind, and sea conditions;</li> <li>l) the development of a Tanker Acceptance Program by Northern Gateway that has been audited by a qualified, competent, independent auditor and the results have been made publically available;</li> <li>m) the development of Terminal Regulations and a Port Information Handbook;</li> <li>n) the non-acceptance of tankers with full width cargo tanks at Kitimat Terminal;</li> <li>o) the use of skilled and properly-trained terminal personnel;</li> <li>p) a requirement for deployment of a boom around tankers during cargo transfer operations;</li> <li>q) the use of tug crews trained in emergency response; and</li> <li>r) enhanced oil spill response capabilities including: <ul style="list-style-type: none"> <li>i) establishment of a Transport Canada-certified Response Organization with a 36 000 cubic metre response capability capable of being at the site of a spill in the confined channel assessment area within 6 to 12 hours, and at the site of a spill in the open water area within 6 to 12 hours plus travel time;</li> <li>ii) strategic location of oil spill response equipment and vessels to meet the response time capabilities;</li> <li>iii) oil spill response capability at the Port of Kitimat that is equal to or greater than that of a designated port;</li> <li>iv) identification and prioritization of particularly sensitive areas for oil spill response in Geographic Response Plans developed in consultation with the Province of British Columbia and potentially-affected communities in the event of a spill; and</li> <li>v) development of Community Response Plans.</li> </ul> </li> </ul>					

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	To demonstrate the above, Northern Gateway must file with the NEB, <b>at least 90 days prior to loading or unloading the first tanker at Kitimat Terminal</b> , confirmation, signed by an officer of the company, that its Marine Voluntary Commitments have been implemented.					
6	<b>Recommendations of the TERMPOL Review Committee</b>  No oil or condensate tanker shall unload or load at Kitimat Terminal until Northern Gateway has implemented or caused to be implemented all the recommendations of the TERMPOL Review Committee as stated in its TERMPOL Review Process report filed on 23 February 2012. To demonstrate this, Northern Gateway must file with the NEB, <b>at least 90 days prior to loading or unloading the first tanker at Kitimat Terminal</b> , confirmation, signed by an officer of the company, that the TERMPOL Review Committee recommendations have been implemented.				6	
7-8	<b>Composite coating</b>  Northern Gateway must use a three-layer composite coating or High Performance Composite Coating for the entire pipeline.		7	8		
<b>Phase: Prior to commencing construction</b>						
9	<b>Transportation Service Agreements (TSAs)</b>  a) Northern Gateway must file with the NEB, <b>within 60 days of executing all TSAs, but not less than six months prior to commencing construction</b> , the long-term, unconditional TSAs executed with shippers demonstrating that sufficient commercial support for the Project has been secured.  b) If Northern Gateway has not filed the TSAs described in a) with the NEB by <b>30 June 2014</b> , it must report to the NEB <b>on this date and every six months thereafter</b> , with a summary of its progress in securing commercial support for the Project and the status of the TSAs.					9
10	<b>Part IV application</b>  Northern Gateway must file with the NEB, <b>within six months after it executes unconditional TSAs with shippers to provide sufficient commercial support for the Project</b> , an application requesting an order or orders from the NEB under Part IV, paragraph 60(1)(a), of the <i>National Energy Board Act</i> for approval of the tolls that Northern Gateway will charge shippers on each pipeline.  Northern Gateway must include the following documents and information with its Part IV application:  a) a copy of all executed TSAs for both the oil export pipeline and the condensate import pipeline for the NEB's review and approval; b) Class III Capital Cost Estimate for the facilities as defined in the Pro Forma TSA filed in August 2011, and as subsequently described in the OH-4-2011 proceeding, and the rate base for each pipeline resulting from these costs; c) a summary of the results of the decision to adopt or reject the cost risk sharing methodology defined in article 6 of the Pro Forma					10

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	<p>Precedent Agreement, filed in August 2011. This summary must include details of any consequential amendments to the Oil Pipeline Toll Principles;</p> <p>d) the Project financing plan and the resulting cost of capital for the Project and for each component in the capital structure for the NEB's review and approval;</p> <p>e) details of how Northern Gateway has set aside reserve capacity for non-term shippers on the oil export pipeline that is a minimum of 10 per cent of the pipeline's nominal capacity (525,000 barrels per day), as well as reserve capacity for non-term shippers on the condensate import pipeline that is a minimum of 10 per cent of the pipeline's nominal capacity (193,000 barrels per day);</p> <p>f) a proposal to manage the reserve capacities on the oil and condensate pipelines through an open, monthly auction process in which eligible bids would fall within floor and ceiling toll limits. The ceiling must be no more than 200 per cent of the Founding Shipper's Option Volume Term Service total toll, and the floor must be no more than 150 per cent of the Founding Shipper's Option Volume Term Service total toll;</p> <p>g) a status report which details and confirms that all potential shippers seeking capacity on the oil and condensate pipelines under the terms of the executed TSAs have been accommodated;</p> <p>h) an assessment of how both the oil and condensate pipelines will satisfy the requirements of subsection 71(1) of the <i>National Energy Board Act</i>; and</p> <p>i) a consolidation of all terms and conditions from the Pro Forma Precedent Agreement, the Pro Forma TSA and the Toll Principles and other relevant sources into a tariff document for each pipeline that would distinguish between shippers at the commencement of operations of each pipeline and potential shippers that may enter into a TSAs after the pipelines commence operation.</p>					
11	<p><b>Additional reports to be filed with the NEB</b></p> <p>Northern Gateway must file with the NEB, <b>at the time of its Part IV filing</b>, the following documents:</p> <p>a) the Direct Owner's Agreement (if any);</p> <p>b) the Northern Gateway Pipeline Limited Partnership Agreement (Limited Partnership Agreement);</p> <p>c) Shareholder Agreement;</p> <p>d) Distribution Policy;</p> <p>e) Funding Support Agreements; and</p> <p>f) any other agreements referenced in the TSA, or otherwise related to the Limited Partnership Agreement.</p>					11
12	<p><b>Commitments Tracking Table</b></p> <p>Northern Gateway must:</p> <p>a) file with the NEB, <b>within 90 days of Project approval</b>, an updated Commitments Tracking Table;</p> <p>b) file with the NEB, <b>at least 30 days prior to commencing construction</b>, further updates to the Commitments Tracking Table;</p> <p>c) update the status of the commitments <b>on a monthly basis</b> until Project completion; and</p>					12

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	<p>d) maintain at each of its construction office(s):</p> <ul style="list-style-type: none"> <li>i) the relevant environmental portion of the Commitments Tracking Table listing all regulatory commitments, including, but not limited to, those commitments from Northern Gateway's Project application and subsequent filings, and conditions from permits, authorizations, and approvals;</li> <li>ii) copies of any permits, authorizations, and approvals for the Project issued by federal, provincial, or other permitting authorities that include environmental conditions or site-specific mitigation or monitoring measures; and</li> <li>iii) any subsequent variances to any permits, authorizations, and approvals in ii).</li> </ul> <p>Northern Gateway must implement the commitments contained within the Commitments Tracking Table.</p>					
13-15	<p><b>Pipeline Environmental Effects Monitoring Program</b></p> <p>Northern Gateway must file with the NEB for approval, <b>within one year after Project approval</b>, a Pipeline Environmental Effects Monitoring Program, in accordance with the Pipeline Environmental Effects Monitoring Program Framework submitted as part of the OH-4-2011 proceeding.</p> <p>The program must address all sections noted in the framework and include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) identification of locations (i.e., along the pipeline route, or at infrastructure sites) where the Pipeline Environmental Effects Monitoring Program will be implemented;</li> <li>b) the duration of the Pipeline Environmental Effects Monitoring Program; and</li> <li>c) a description of how available and applicable Aboriginal Traditional Knowledge and Traditional Land Use (TLU) studies have been taken into consideration in developing the framework.</li> </ul>	13	14	15		
16-18	<p><b>Pipeline Environmental Effects Monitoring Program: pre-construction survey framework</b></p> <p>Northern Gateway must file with the NEB, <b>within one year after Project approval</b>, a survey framework associated with the Pipeline Environmental Effects Monitoring Program (required by Conditions 13-15), including, but not limited to:</p> <ul style="list-style-type: none"> <li>a) a list of species to be surveyed, including species at risk, and survey methods for each species;</li> <li>b) a summary of the outcomes of Northern Gateway's collaboration with relevant government authorities, participating Aboriginal groups, research organizations, and public stakeholder groups on the survey framework; and</li> <li>c) a description of how available and applicable Aboriginal Traditional Knowledge and TLU studies have been taken into consideration in developing the framework.</li> </ul>	16	17	18		
19-21	<p><b>Pipeline Environmental Effects Monitoring Program: pre-construction survey results and monitoring plans</b></p> <p>Northern Gateway must file with the NEB, <b>within 30 days after completing the Pipeline Environmental Effects Monitoring Program pre-construction surveys</b>, the following:</p> <ul style="list-style-type: none"> <li>a) survey results and evidence that they were provided to the appropriate federal and provincial authorities;</li> </ul>	19	20	21		

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	<ul style="list-style-type: none"> <li>b) monitoring plans stemming from survey results and how those plans will be incorporated into the Pipeline Environmental Effects Monitoring Program or, if no further monitoring is planned for certain species or habitats, a justification; and</li> <li>c) a summary of the outcomes of Northern Gateway's collaboration with relevant government authorities, participating Aboriginal groups, research organizations, and public stakeholder groups on the monitoring plans.</li> </ul>					
22	<p><b>Marine Environmental Effects Monitoring Program</b></p> <p>Northern Gateway must file with the NEB for approval, <b>within one year after Project approval</b>, a Marine Environmental Effects Monitoring Program, in accordance with the Marine Environmental Effects Monitoring Program Framework submitted as part of the OH-4-2011 proceeding. The Marine Environmental Effects Monitoring Program must address all sections noted in the framework.</p>					22
23	<p><b>Marine Environmental Effects Monitoring Program: pre-construction survey framework</b></p> <p>Northern Gateway must file with the NEB for approval, <b>within one year after Project approval</b>, a survey framework associated with the Marine Environmental Effects Monitoring Program (required by Condition 22), including, but not limited to:</p> <ul style="list-style-type: none"> <li>a) a list of species to be surveyed, including species at risk, and survey methods for each species;</li> <li>b) a summary of the outcomes of Northern Gateway's collaboration with relevant government authorities, participating Aboriginal groups, research organizations, and public stakeholder groups on the survey framework; and</li> <li>c) a description of how available and applicable Aboriginal Traditional Knowledge and TLU studies have been taken into consideration in developing the survey framework.</li> </ul>					23
24	<p><b>Marine Environmental Effects Monitoring Program: pre-construction survey results and monitoring plans</b></p> <p>Northern Gateway must file with the NEB, <b>within 90 days after completing the Marine Environmental Effects Monitoring Program pre-construction surveys</b>, but no later than one year prior to commencing operations, the following:</p> <ul style="list-style-type: none"> <li>a) survey results and evidence that they were provided to the appropriate federal and provincial authorities;</li> <li>b) monitoring plans stemming from survey results and how those will be incorporated into the Marine Environmental Effects Monitoring Program or, if no further monitoring is planned for certain species or habitats, a justification;</li> <li>c) a summary of the outcomes of Northern Gateway's collaboration with relevant government authorities, participating Aboriginal groups, research organizations, and public stakeholder groups on the monitoring plans; and</li> <li>d) a description of how available and applicable Aboriginal Traditional Knowledge and TLU studies have been taken into consideration in developing the monitoring plans.</li> </ul>					24
25	<p><b>Temporary Foreign Worker Labour Market Opinion (LMO)</b></p> <p>Northern Gateway must notify the NEB <b>within 14 days after making any application to Service Canada for a Labour Market Opinion (LMO)</b> for the purposes of using Temporary Foreign Workers for Project construction.</p>					25

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	Northern Gateway must also file with the NEB, within <b>14 days of receipt</b> , a copy of any LMO issued by Service Canada.					
26-28	<p><b>Quality Management Plan</b></p> <p>Northern Gateway must file with the NEB, <b>at least four months prior to any procurement</b>, a Project-specific Quality Management Plan that includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>a) material/vendor qualification requirements;</li> <li>b) quality control and assurance of pipe and components that ensure all materials meet Enbridge specifications (i.e., processes, procedures, specifications, inspection, random testing, inspection, and test reports);</li> <li>c) mandatory documentation of process conditions during manufacture and verification of the conformance of manufacturer material test reports with Enbridge requirements;</li> <li>d) mandatory inspection requirements, inspector competency training, and qualifications;</li> <li>e) non-conformance reporting and correction procedures;</li> <li>f) change management process; and</li> <li>g) commissioning requirements.</li> </ul>		26	27	28	
29-30	<p><b>Report – loading and dynamic effects</b></p> <p>Northern Gateway must file with the NEB, <b>at least three months prior to pipe manufacture</b>, a report summarizing the loading and dynamic effects considered during final design and which confirms that the pipeline has adequate strength to resist these loadings.</p> <p>If Annex C of CSA Z662-11 is used in the design of certain sections of the pipeline, Northern Gateway must file with the NEB, <b>at least three months prior to pipe manufacture</b>, an engineering report describing how allowable strains for the pipeline were established giving due consideration to clause C.8.9.1 and the notes accompanying Tables C.1, C.2, and C.3. This report must include the potential effects of strain-aging and strain rate. If experimentally-established allowable strains are available, these must be referenced in the report.</p>		29	30		
31-32	<p><b>Fracture toughness</b></p> <p>Northern Gateway must:</p> <ul style="list-style-type: none"> <li>a) determine the Charpy V-Notch toughness (CVN) value and the minimum acceptable value for crack tip opening displacement (CTOD) for weld metal and heat-affected zone of mill circumferential, helical (if practicable), and longitudinal welds, for the lowest installation temperature and the most severe deformation during construction or operation. The CVN and CTOD tests must be conducted for all combinations of pipe steel producers and pipe mill manufacturers and be representative of applicable Project pipe with the maximum carbon equivalent (CE) heat;</li> <li>b) determine the minimum acceptable values for the CVN and CTOD for field circumferential welds for the lowest installation temperature and the most severe deformation during construction or operation. The CVN and CTOD tests must be conducted at the welding procedure development phase, for all combinations of pipe steel producers and pipe mill manufacturers and must be</li> </ul>		31	32		

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	<p>representative of applicable Project pipe with the maximum CE heat; and</p> <p>c) file with the NEB minimum acceptable CVN and CTOD values and results of the tests as follows:</p> <ul style="list-style-type: none"> <li>i) for the mill qualification welds, <b>at least 60 days prior to pipe manufacture</b>; and</li> <li>ii) for the field circumferential qualification welds, <b>at least 60 days prior to field welding</b>.</li> </ul>					
33-34	<p><b>Pipeline overpressure risk reduction</b></p> <p>Northern Gateway must ensure that the maximum operating head profile of the pipeline is greater than or equal to the maximum discharge head of the upstream pump station, wherever possible. Northern Gateway must file with the NEB, <b>at least 60 days prior to pipe manufacture</b>, written confirmation that it has implemented this requirement. In the event that this is not possible, Northern Gateway must file design and operational measures that will reduce or eliminate the risk of overpressure at those locations.</p>		33	34		
35-37	<p><b>Joining Program</b></p> <p>Northern Gateway must develop a Joining Program and file it with the NEB <b>at least 30 days prior to conducting welding procedure qualification tests</b> for:</p> <ul style="list-style-type: none"> <li>a) field circumferential production, tie-in, and repair pipeline welds; and</li> <li>b) welding of Project facilities.</li> </ul> <p>The Joining Program must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>i) requirements for welder qualifications;</li> <li>ii) requirements for welding inspector qualifications and duties;</li> <li>iii) welding procedure specifications;</li> <li>iv) non-destructive examination specifications;</li> <li>v) procedure qualification records for welding procedure specifications and non-destructive testing specifications;</li> <li>vi) quality assurance program for field welds and welding procedures; and</li> <li>vii) any additional information that supports the joining program.</li> </ul>		35	36	37	
38	<p><b>Fisheries Liaison Committee (FLC) meeting summaries</b></p> <p>Northern Gateway must file with the NEB, <b>at least one year prior to commencing construction</b>, a report summarizing the meetings of the FLC. The report must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) a list of FLC members or attendees at each meeting;</li> <li>b) meeting agendas; and</li> <li>c) a summary of the discussions had and decisions made at each meeting.</li> </ul> <p>Northern Gateway must file with the NEB, <b>at least six months prior to commencing construction</b>, an update to this report containing</p>					38

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		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	any updates to a) through c).					
39	<p><b>Aboriginal, local, and regional skills and business capacity inventory</b></p> <p>Northern Gateway must file with the NEB, <b>at least one year prior to commencing construction</b>, an Aboriginal, local, and regional skills and business capacity inventory for the Project. The inventory must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) a description of the information sources, including Northern Gateway's Regional Skills and Business Inventory Database, and any other sources;</li> <li>b) a summary of Aboriginal, local, and regional skills and business capacity;</li> <li>c) analysis of the ability of Aboriginal, local, and regional capacity for meeting Northern Gateway's commitments for Aboriginal, local, and regional employment and business opportunities for the Project;</li> <li>d) a description of identified potential skills and business capacity gaps, and any proposed measures to address potential capacity gaps, or to support or increase skills or capacity; and</li> <li>e) plans for communicating with Aboriginal, local, and regional communities and businesses regarding skills and business capacity, any identified gaps, and any proposed measures to support or increase skills or capacity.</li> </ul> <p>Northern Gateway must file with the NEB, <b>at least six months prior to commencing construction</b>, an update to this inventory containing any updates to a) through e).</p>					39
40	<p><b>Training and Education Monitoring Plan</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least one year prior to commencing construction</b>, a plan for monitoring the implementation and outcomes of Aboriginal, local, and regional training and education measures and opportunities for the Project. The plan must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) a description of the elements or indicators that will be monitored to track the implementation of training and education measures and opportunities, and progress toward meeting intended outcomes of these measures and opportunities, including a rationale for selection;</li> <li>b) the methods and schedule of monitoring, including the information sources; and</li> <li>c) plans for consulting and reporting on the implementation and outcomes of training and education measures and opportunities with relevant Aboriginal, local, and regional communities; industry groups or representatives; government sponsors; and education delivery agencies and institutions.</li> </ul> <p>Northern Gateway must file with the NEB, <b>at least six months prior to commencing construction</b>, an update to this plan containing any updates to a) through c).</p>					40
41	<p><b>Aboriginal, Local, and Regional Employment Monitoring Plan</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least one year prior to commencing construction</b>, a plan for monitoring</p>					41

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<p>Aboriginal, local, and regional employment for the Project. The plan must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) a description of the elements or indicators that will be monitored to track Aboriginal, local, and regional employment;</li> <li>b) a rationale for selecting all elements or indicators, including those specific to tracking progress toward meeting Northern Gateway's commitment of 15 per cent Aboriginal employment;</li> <li>c) methods and schedule of monitoring, including the information sources; and</li> <li>d) plans for consulting and reporting on Aboriginal, local, and regional employment with relevant Aboriginal, local, and regional communities; and industry groups or representatives.</li> </ul> <p>Northern Gateway must file with the NEB, <b>at least six months prior to commencing construction</b>, an update to this plan containing any updates to a) through d).</p>					
42	<p><b>Aboriginal Contracting and Procurement Monitoring Plan</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least one year prior to commencing construction</b>, a plan for monitoring Aboriginal contracting and procurement for the Project. The plan must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) a description of the elements or indicators that will be monitored to track Aboriginal contracting and procurement for the Project, including a rationale for selection of elements or indicators;</li> <li>b) the methods and schedule of monitoring, including the information sources; and</li> <li>c) plans for consulting and reporting on contracting and procurement with relevant Aboriginal communities, businesses, and individuals.</li> </ul>					42
43-46	<p><b>TLU investigation plan</b></p> <p>Northern Gateway must file with the NEB for approval and serve a copy on all potentially-affected Aboriginal groups, <b>at least one year prior to commencing construction</b>, a plan for undertaking TLU investigations. The plan must describe:</p> <ul style="list-style-type: none"> <li>a) the methods that will be used to identify potentially-affected TLU sites and resources;</li> <li>b) the spatial boundaries and proposed timing of TLU investigations;</li> <li>c) how information from any supplementary physical, bio-physical, and heritage resource field investigation or activities relevant to TLU resources or potentially-affected Aboriginal groups will be incorporated into TLU investigations;</li> <li>d) the general and specific TLU site types and resources that are anticipated to be encountered during investigations;</li> <li>e) the standard mitigation measures that will be employed to minimize or eliminate potential adverse effects on TLU sites and resources;</li> <li>f) any special mitigation proposed by Northern Gateway or requested by potentially-affected Aboriginal groups to address potential Project effects on TLU sites and resources;</li> <li>g) a summary of Northern Gateway's consultation with potentially-affected Aboriginal groups regarding the TLU investigation plan.</li> </ul>	43	44	45	46	

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<p>This summary must include:</p> <ul style="list-style-type: none"> <li>i) a description of any agreements or protocols regarding TLU investigations developed with potentially-affected Aboriginal groups;</li> <li>ii) any issues or concerns raised by those consulted with regarding the plan, and how Northern Gateway has addressed those issues or concerns; and</li> <li>iii) a list of outstanding issues or concerns, an explanation as to why these remain outstanding, and the steps that Northern Gateway will take to address any outstanding issues or concerns;</li> <li>h) details of the process for updating the plan; and</li> <li>i) how the results of TLU investigations will be provided to potentially-affected Aboriginal groups, including proposed timing, methods of communication, and opportunities to comment on the findings and proposed mitigation.</li> </ul>					
47	<p><b>Development of Marine Mammal Protection Plans</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least nine months prior to commencing construction</b>, a description and outline of how it intends to develop its Marine Mammal Protection Plans for construction and operations (required by Conditions 74 and 173). The Marine Mammal Protection Plans must address all sections noted in the Framework for the Marine Mammal Protection Plan submitted as part of the OH-4-2011 proceeding. The description and outline of how it intends to develop these plans must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) how Northern Gateway will implement, monitor, and ensure compliance with voluntary marine mammal protection measures that it has made in relation to marine shipping associated with the Project;</li> <li>b) a discussion on proposed monitoring and research initiatives and how the results of these initiatives will be incorporated in the Marine Mammal Protection Plans;</li> <li>c) a summary of Northern Gateway's consultation with Fisheries and Oceans Canada, Transport Canada, other appropriate stakeholders, and potentially-affected Aboriginal groups regarding the Marine Mammal Protection Plans. This summary must include any issues or concerns raised by those consulted with regarding the plans and how Northern Gateway has addressed or responded to those issues or concerns;</li> <li>d) a description of the reporting structure for any marine mammals struck, injured, or killed during construction and operations; and</li> <li>e) a description of how Northern Gateway intends to communicate and report the results of its marine mammal mitigation and monitoring activities.</li> </ul>				47	
48-51	<p><b>Environmental Protection Management Plan (EPMP)</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least six months prior to commencing construction</b>, an updated EPMP, including Environmental Alignment Sheets.</p> <p>This EPMP must be a comprehensive compilation of all environmental protection procedures, mitigation measures, and monitoring commitments, as set out in Northern Gateway's Project application, its subsequent filings, evidence collected during the hearing process,</p>	48	49	50	51	

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<p>or as otherwise committed to during questioning or in its related submissions during the OH-4-2011 proceeding. The EPMP and Environmental Alignment Sheets must subsequently be updated to include any additional measures arising from all outstanding pre-construction field studies. The EPMP may be divided into separate plans by spread, region, or work area, as deemed necessary.</p> <p>The EPMP must include, but not be limited to, the following elements:</p> <ul style="list-style-type: none"> <li>a) environmental procedures, including site-specific plans, criteria for implementing these procedures, mitigation measures, and monitoring applicable to all Project phases and activities;</li> <li>b) contingency plans and environmental management plans as outlined in the preliminary EPMP filed in Volume 7A of the Project application;</li> <li>c) a reclamation plan which includes a description of the condition to which Northern Gateway intends to reclaim and maintain disturbed areas once construction has been completed, and a description of measurable goals for reclamation; and</li> <li>d) a summary of Northern Gateway's consultation with Fisheries and Oceans Canada, Environment Canada, the British Columbia Ministry of Environment, Alberta Environment, other appropriate stakeholders, and potentially-affected Aboriginal groups regarding the EPMP. This summary must include any issues or concerns raised by those consulted with regarding the EPMP and how Northern Gateway has addressed or responded to those issues or concerns.</li> </ul>					
52	<p><b>FLC operational guidelines</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least six months prior to commencing in-water construction for Kitimat Terminal</b>, operational guidelines for the FLC for the Project. The FLC guidelines must, at a minimum:</p> <ul style="list-style-type: none"> <li>a) identify how membership on the FLC will be determined;</li> <li>b) identify the structure of the FLC;</li> <li>c) identify an officer of Northern Gateway who will be accountable for the implementation of the guidelines;</li> <li>d) include information on how the FLC will be funded both initially and on an ongoing basis, including information on any funding available to FLC members; and</li> <li>e) describe the scope, mandate, and operational protocols to be addressed or implemented by the FLC, including, but not limited to: <ul style="list-style-type: none"> <li>i) the goals of the FLC;</li> <li>ii) the issues and activities that will be within the mandate of the FLC;</li> <li>iii) the scope, methods, and timing of studies to establish or determine baseline information regarding marine fisheries;</li> <li>iv) the protocols and procedures for documenting, reporting, and determining fair compensation for lost or damaged fishing gear as a result of the Project;</li> <li>v) the protocols and mechanisms for implementing recommendations or decisions of the FLC;</li> <li>vi) a dispute resolution process; and</li> <li>vii) the protocols for reporting and communications with FLC members, member constituents, and other potentially-affected or</li> </ul> </li> </ul>				52	

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	interested parties.					
53	<p><b>Socio-Economic Effects Monitoring Plan</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least six months prior to commencing construction</b>, a plan for monitoring potential adverse socio-economic effects of the Project during construction. The plan must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) the constituent factors or indicators to be monitored;</li> <li>b) the methods and rationale for selecting the factors or indicators;</li> <li>c) identification of the baseline, pre-construction socio-economic conditions;</li> <li>d) methods and schedule of monitoring, including identification of third party data sources;</li> <li>e) details of data recording, assessment and reporting;</li> <li>f) details of how measures will be implemented to address adverse effects, should any be identified, including: <ul style="list-style-type: none"> <li>i) the criteria or thresholds that will require measures to be implemented;</li> <li>ii) how monitoring methods and the implementation of measures to address adverse effects, as necessary, are incorporated into detailed Construction Execution Plans; and</li> <li>iii) a description of the roles of construction prime contractors, sub-contractors, and community liaison staff in monitoring socio-economic effects and implementing measures to address adverse effects;</li> </ul> </li> <li>g) a summary of Northern Gateway's consultation with potentially-affected communities, Aboriginal groups, local and regional authorities, and service providers regarding the Socio-Economic Effects Monitoring Plan. This summary must include: <ul style="list-style-type: none"> <li>i) a description of any agreements or protocols developed;</li> <li>ii) any issues or concerns raised by those consulted with regarding the plan, and how Northern Gateway has addressed or responded to those issues or concerns; and</li> <li>iii) a list of outstanding issues or concerns, an explanation why these remain outstanding, and the steps that Northern Gateway will take to address any outstanding issues or concerns; and</li> </ul> </li> <li>h) plans for regular consultation and reporting on effects during construction with potentially-affected communities, Aboriginal groups, local and regional authorities, and service providers.</li> </ul>					53
54-57	<p><b>Pre-construction TLU investigation report</b></p> <p>Northern Gateway must file with the NEB for approval and serve a copy on all potentially-affected Aboriginal groups, <b>at least six months prior to commencing construction</b>, a report describing the pre-construction TLU investigations it has undertaken. The report must include:</p> <ul style="list-style-type: none"> <li>a) a summary of the TLU and other relevant physical, bio-physical, and heritage resource investigations undertaken, including scope, spatial extent, methods used, timing, and activities undertaken with each potentially-affected Aboriginal group;</li> <li>b) a description of the Project effects on the current use of lands and resources for traditional purposes identified in the investigations;</li> </ul>	54	55	56	57	

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<p>c) a summary of all mitigation measures that will be employed to reduce or eliminate identified effects on the current use of lands and resources for traditional purposes;</p> <p>d) a description of how Northern Gateway has incorporated mitigation measures into its EPMPs for the Project (required by Conditions 48-51);</p> <p>e) a description of any concerns raised by potentially-affected Aboriginal groups regarding potential effects on the current use of lands and resources for traditional purposes, including a list of outstanding issues or concerns and an explanation why these concerns remain outstanding; and</p> <p>f) a summary of any outstanding TLU investigations or follow-up activities that will not be completed prior to commencing construction, including an explanation as to why these will not be completed prior to construction, an estimated completion date, if applicable, and a description of how Northern Gateway has or will identify any potential effects if the identified outstanding investigations will not be completed prior to construction.</p> <p>Northern Gateway must file with the NEB, <b>at least 90 days prior to commencing construction</b>, an update to this report containing any updates to a) through f).</p>					
58	<p><b>Training and education monitoring reports</b></p> <p>Northern Gateway must file with the NEB, <b>at least six months prior to commencing construction, and every six months thereafter until completing construction</b>, monitoring reports for the implementation and outcomes of Aboriginal, local, and regional training and education measures and opportunities for the Project. The reports must include, but not be limited to:</p> <p>a) a description of each training and education measure or opportunity implemented during the reporting period, including duration, participant groups, delivery agency or institution, and intended outcomes;</p> <p>b) a description of the elements or indicators that were monitored;</p> <p>c) a summary and analysis of the progress made toward meeting intended outcomes of each training and education measure, including an explanation for why any intended outcomes were not met;</p> <p>d) a description of identified potential training or education gaps, and any proposed measures to address potential gaps, or to support or increase training and education measures; and</p> <p>e) a summary of Northern Gateway's consultation with relevant Aboriginal, local, and regional communities; relevant industry groups or representatives; government sponsors; and education delivery agencies and institutions regarding the implementation and outcomes of measures for the reporting period. This summary must include any issues or concerns raised by those consulted with regarding the implementation and outcomes of measures and how Northern Gateway has addressed or responded to those issues or concerns.</p> <p>Northern Gateway must file with the NEB, <b>within six months after completing construction</b>, a final report.</p>				58	
59-62	<p><b>Wetlands Functional Assessment Plan</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least six months prior to commencing construction</b>, a Wetland Functional</p>	59	60	61	62	

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<p>Assessment Plan. The Wetland Functional Assessment Plan must address all sections noted in the Draft Wetland Function Assessment Framework submitted as part of the OH-4-2011 proceeding and all of Northern Gateway's commitments regarding wetlands during the course of the OH-4-2011 proceeding. This plan must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) the presence and distribution of wildlife species at risk in relation to potentially-impacted wetlands and associated riparian areas;</li> <li>b) the criteria, and the rationale for the criteria, for the crossing methods and mitigation measures to be implemented for affected wetlands;</li> <li>c) details of the monitoring plan for the first three years of operations;</li> <li>d) details of the Wetland Compensation Plan;</li> <li>e) a description of how available and applicable Aboriginal Traditional Knowledge and TLU studies have been taken into consideration in developing the Wetland Functional Assessment Plan; and</li> <li>f) a summary of Northern Gateway's consultation with Environment Canada, other appropriate provincial and federal authorities, other appropriate stakeholders, and potentially-affected Aboriginal groups regarding the Wetland Functional Assessment Plan. This summary must include any issues or concerns raised by those consulted with regarding the plan and how Northern Gateway has addressed or responded to those issues or concerns.</li> </ul>					
63-64	<p><b>Access Management Plan</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least six months prior to commencing construction</b>, an Access Management Plan outlining access control measures proposed for construction, operation, and decommissioning. The Access Management Plan must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) goals and objectives regarding access management;</li> <li>b) the criteria for measuring the plan's success in achieving these goals and objectives;</li> <li>c) a summary of related baseline information that will be collected and, if no additional information will be collected, a justification;</li> <li>d) a list of sites where access control measures will be implemented, the control measure(s) proposed at those sites, and the rationale for selecting those sites and measures;</li> <li>e) a summary of Northern Gateway's consultation with appropriate federal and provincial authorities, other appropriate stakeholders, and potentially-affected Aboriginal groups regarding the Access Management Plan. This summary must include any issues or concerns raised by those consulted with regarding the plan and how Northern Gateway has addressed or responded to those issues or concerns;</li> <li>f) the methods for monitoring the effectiveness of access control measures implemented;</li> <li>g) a description of adaptive management measures available and of the criteria Northern Gateway will use to determine if and when adaptive management measures are warranted;</li> <li>h) a detailed description of the locations where access control measures are put in place specifically for construction, as well as those that will remain in place into operations and will be monitored for the life of the Project; and</li> </ul>		63	64		

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		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	i) a commitment to report on the results of the control measures implemented, monitoring undertaken, and the success of control measures in meeting the goals and objectives of the Access Management Plan, as part of Northern Gateway's post-construction environmental monitoring reports (required by Condition 185).					
65-67	<p><b>Pre-construction caribou habitat assessment</b></p> <p>For areas of the Project that are within a federally-designated caribou range, Northern Gateway must file with the NEB for approval, <b>at least six months prior to commencing construction</b>, a detailed caribou habitat assessment. The framework of the habitat assessment should use the components of critical habitat outlined in the appropriate <i>Woodland Caribou Recovery Strategy</i>, where available. The habitat assessment must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) map(s) indicating the location of the habitat;</li> <li>b) a description of the amount of habitat, in hectares, and the existing habitat alteration;</li> <li>c) a description of how available and applicable Aboriginal Traditional Knowledge and TLU studies have been taken into consideration in the assessment; and</li> <li>d) a description of the type of habitat characterized by the biophysical attributes of critical habitat, as defined in the appropriate <i>Woodland Caribou Recovery Strategy</i>, where available.</li> </ul>	65	66	67		
68-70	<p><b>Caribou Habitat Restoration Plan (CHRP)</b></p> <p>Northern Gateway must file with the NEB for approval, in accordance with the timelines below, preliminary and final versions of a CHRP.</p> <ul style="list-style-type: none"> <li>a) Preliminary CHRP - to be filed <b>at least six months prior to commencing construction</b>. This version of the CHRP must include, but not be limited to: <ul style="list-style-type: none"> <li>i) the objectives of the CHRP for each caribou range;</li> <li>ii) a list of criteria used to identify potential caribou habitat restoration sites;</li> <li>iii) a description of how available and applicable Aboriginal Traditional Knowledge and TLU studies have been taken into consideration in identifying potential caribou habitat restoration sites;</li> <li>iv) a conceptual decision-making tree(s) or process that will be used to identify restoration actions to be used at different types of sites. The decision process should be based on a literature review of caribou habitat restoration methods and their relative effectiveness, and address typical site factors that may constrain implementation;</li> <li>v) the quantifiable targets and performance measures that will be used to evaluate: (1) the extent of predicted, residual effects, and (2) effectiveness of the CHRP, the extent to which the objectives have been met, and the need for further measures to offset effects to habitat;</li> <li>vi) a schedule indicating when mitigation measures will start and the estimated completion date; and</li> <li>vii) a summary of Northern Gateway's consultation with Environment Canada, appropriate provincial authorities, other appropriate stakeholders, and potentially-affected Aboriginal groups regarding the preliminary CHRP. This summary must</li> </ul> </li> </ul>	68	69	70		

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	<p>include any issues or concerns raised by those consulted with regarding the preliminary CHRP and how Northern Gateway has addressed or responded to those issues or concerns.</p> <p>b) Final CHRP - to be filed <b>on or before 1 November after the first complete growing season after commencing operations</b>. This updated version of the CHRP must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>i) the preliminary CHRP, with any updates identified in a revision log that includes the rationale for any changes;</li> <li>ii) a detailed decision-making tree(s) or process that will be used to identify and prioritize restoration actions among selected habitat restoration sites;</li> <li>iii) a complete tabular list of caribou habitat restoration sites, including, but not limited to, location, spatial area, description of habitat quality, site-specific restoration activities, and challenges;</li> <li>iv) maps or Environmental Alignment Sheets showing the locations of the sites;</li> <li>v) a summary of Northern Gateway's consultation with Environment Canada, appropriate provincial authorities, other appropriate stakeholders, and potentially-affected Aboriginal groups regarding the final CHRP. This summary must include any issues or concerns raised by those consulted with regarding the final CHRP and how Northern Gateway has addressed or responded to those issues or concerns; and</li> <li>vi) a quantitative and qualitative assessment of the total area of direct disturbance to caribou habitat that will be restored, the duration of spatial disturbance, and the extent of the resulting residual effects to be offset, which also includes indirect disturbance.</li> </ul>					
71-73	<p><b>Linear Feature Management and Removal Plan</b></p> <p>Northern Gateway must file with the NEB, <b>at least six months prior to commencing construction</b>, a Linear Feature Management and Removal Plan, in accordance with the Linear Feature Management and Removal Plan Framework submitted as part of the OH-4-2011 proceeding. The plan must address all sections noted in the framework and include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) goals and objectives of the Linear Feature Management and Removal Plan;</li> <li>b) the criteria for measuring success of the plan in achieving these goals and objectives;</li> <li>c) identification of areas where linear feature management and removal measures will be implemented;</li> <li>d) linear feature management and removal measures that are proposed in the areas identified;</li> <li>e) a summary of Northern Gateway's consultation with appropriate federal and provincial authorities, other appropriate stakeholders, and potentially-affected Aboriginal groups regarding the Linear Feature Management and Removal Plan. This summary must include any issues or concerns raised by those consulted with regarding the plan and how Northern Gateway has addressed or responded to those issues or concerns; and</li> <li>f) details of the follow-up program proposed by Northern Gateway to assess effectiveness of the Linear Feature Management and Removal Plan, including provisions to apply adaptive management principles when required and scheduling of follow-up reports to report on the attainment of the goals and objectives associated with the plan.</li> </ul>	71	72	73		

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74	<p><b>Construction Marine Mammal Protection Plan</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least six months prior to commencing construction</b>, a Construction Marine Mammal Protection Plan. The plan must be prepared in accordance with the Framework for the Marine Mammal Protection Plan submitted as part of the OH-4-2011 proceeding, and must include all mitigation measures and monitoring of marine mammals to be implemented during the Kitimat Terminal construction period.</p> <p>The Construction Marine Mammal Protection Plan must include a summary of Northern Gateway's consultation with Fisheries and Oceans Canada, Transport Canada, other appropriate stakeholders, and potentially-affected Aboriginal groups regarding the plan. This summary must include any issues or concerns raised by those consulted with regarding the plan and how Northern Gateway has addressed or responded to those issues or concerns.</p>				74	
75-77	<p><b>Geohazard Assessment, Mitigation, and Monitoring Report</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least six months prior to commencing construction</b>, a final Geohazard Assessment, Mitigation, and Monitoring Report that describes, at a minimum:</p> <ul style="list-style-type: none"> <li>a) in a table and/or using maps, the specific and combined geohazards identified that could have a reasonable probability of impacting the Project;</li> <li>b) specific design measures such as grading, special materials, installation procedures, protective structures, increased burial depth, erosion mitigation measures, and monitoring that will be implemented to mitigate individual and combined geohazards;</li> <li>c) staff qualifications for those making decisions regarding the assessment and mitigation design; and</li> <li>d) ongoing monitoring requirements.</li> </ul> <p>The report must include a copy of the report(s) by the independent geohazard working group (or committee) comprised of specialists from various organizations, including, but not limited to, governments, local experts, and consultants for Northern Gateway.</p> <p>For the pipeline, Northern Gateway must assess the terrain from height of land on both sides of the pipeline route in the Coast and Rocky Mountains.</p>		75	76	77	
78-79	<p><b>Tunnel infrastructure</b></p> <p>Northern Gateway must file with the NEB, <b>at least six months prior to commencing tunnel construction activities</b>:</p> <ul style="list-style-type: none"> <li>a) a report on the characterization of the rock mass quality and groundwater conditions expected to be encountered during construction and how they will be addressed during construction;</li> <li>b) details of mitigation measures for control and treatment of groundwater during and following construction;</li> <li>c) details of mitigation measures for the treatment of sulphide-bearing rock, if encountered;</li> <li>d) tunnel confined space entry procedures during and following construction;</li> <li>e) final cross-sectional design drawings; and</li> <li>f) details of the construction plans for the tunnels including but not limited to:</li> </ul>		78	79		

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		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<ul style="list-style-type: none"> <li>i) construction methods to be used;</li> <li>ii) permanent road access;</li> <li>iii) tunnel portals and doors;</li> <li>iv) geohazard mitigation measures at tunnel entrances;</li> <li>v) tunnel lining system;</li> <li>vi) ground support system;</li> <li>vii) ventilation and lighting;</li> <li>viii) location, size, and design of waste rock disposal areas; and</li> <li>ix) location, size, and design of staging areas.</li> </ul>					
80-81	<p><b>Pipeline construction within tunnels</b></p> <p>Northern Gateway must file with the NEB, <b>at least six months prior to commencing pipeline installation in the tunnels</b>, a detailed description of how the pipeline segments within the tunnels will be constructed, including, but not limited to, welding, non-destructive examination, protective coatings, and pressure testing.</p>		80	81		
82	<p><b>Air Quality Emissions Management and Soil Monitoring Plan</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least four months prior to commencing construction</b>, an Air Quality Emissions Management and Soil Monitoring Plan for Kitimat Terminal. The potential for foliar injury should be reflected in the modeling and monitoring design. This plan must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) an identification of the baseline, pre-construction conditions, informed by relevant modeling results and recent, existing monitor data;</li> <li>b) locations of both air and soil monitoring sites on a map or diagram, including the rationale for the locations selected and the timing for installation;</li> <li>c) methods and schedule of ambient monitoring for contaminants of potential concern (such as NO<sub>2</sub>, SO<sub>2</sub>, and H<sub>2</sub>S) and emissions source tracking;</li> <li>d) details of data recording, assessment, and reporting;</li> <li>e) the process for public communication and complaint response;</li> <li>f) details of the additional measures that will be implemented as a result of monitoring data or ongoing concern;</li> <li>g) the criteria or thresholds that will require the implementation of additional measures;</li> <li>h) details of the process for updating the plan;</li> <li>i) a summary of Northern Gateway's consultation with Environmental Canada and the British Columbia Ministry of Environment regarding the Air Quality Emissions Management and Soil Monitoring Plan. This summary must include any issues or concerns raised by those consulted with regarding the plan and how Northern Gateway has addressed or responded to those issues or</li> </ul>				82	

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<p>concerns; and</p> <p>j) a summary of discussions with the District of Kitimat and local or regional industrial emitters regarding collaboration on the design and implementation of the plan.</p>					
83-84	<p><b>Watercourse crossing design</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least four months prior to commencing construction</b>:</p> <p>a) an updated aquatic catalogue for all watercourse crossings based on centerline surveys;</p> <p>b) a Watercourse Crossing Inventory, in both Adobe PDF and Microsoft Excel spreadsheet formats, describing the watercourse name and numerical identifier, coordinates, stream class, width of wetted channel, primary and secondary construction methods, minimum pipeline cover (except for aerial crossings), navigability, fish habitat status, and level of assessment;</p> <p>c) detailed final design drawings and plans for all high-, medium-high, and medium-risk watercourse crossings to mitigate environmental or safety concerns including the design flood level, calculated vertical and lateral scour potential, and proposed mitigation measures;</p> <p>d) detailed final design drawings of typical designs for open-cut and isolated crossings of various watercourse types;</p> <p>e) a description of how available and applicable Aboriginal Traditional Knowledge and TLU studies have been taken into consideration in developing the designs; and</p> <p>f) a summary of Northern Gateway's consultation with Fisheries and Oceans Canada, Environment Canada, the British Columbia Ministry of Environment, and Alberta Environment regarding the design of watercourse crossings. This summary must include any issues or concerns raised by those consulted with regarding these designs and how Northern Gateway has addressed or responded to those issues or concerns.</p>		83	84		
85-86	<p><b>Provisional least risk periods</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least four months prior to commencing construction</b>:</p> <p>a) a list of the provisional least risk periods for each watercourse crossing with no established least risk period, which reflects the habitat use by fish during the proposed construction period(s);</p> <p>b) the rationale for each provisional least risk period;</p> <p>c) any additional mitigation measures that will be applied in each case; and</p> <p>d) a summary of Northern Gateway's consultation with Fisheries and Oceans Canada and the British Columbia Ministry of Environment that describes their views on the provisional least risk periods and any additional mitigation measures to be applied.</p>		85	86		
87	<p><b>List of infrastructure sites</b></p> <p>Northern Gateway must file with the NEB, <b>at least 90 days prior to commencing construction</b>, and any updates <b>as they are available</b>, a complete list of all infrastructure sites (based on the definition provided in advance of this table) to be used for the Project. This list must include information on each site's location, structures to be installed, the anticipated date for commencing construction,</p>	87				

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	and activities involved in its construction. The initial list and updates to it must also include the condition numbers (those under the “prior to commencing construction” phase heading) that are applicable to each site and an indication of whether each of those conditions has been or remains to be satisfied.					
88	<b>Construction schedule</b>  Northern Gateway must file with the NEB, <b>at least 90 days prior to commencing construction</b> , a detailed construction schedule identifying major construction activities and, <b>on a monthly basis from the start of any clearing to the beginning of operations</b> , updated construction schedules.					88
89	<b>Security Program</b>  Northern Gateway must confirm with the NEB in writing, <b>at least 90 days prior to commencing construction</b> , that a Security Program for the construction and operational phases of the Project has been developed, pursuant to NEB Proposed Regulatory Change 2010-01 - <i>Adoption of CSA Z246.1-09 Security Management for Petroleum and Natural Gas Industry Systems</i> (3 May 2010).					89
90	<b>Emergency Response Plan for construction</b>  Northern Gateway must file with the NEB, <b>at least 90 days prior to commencing construction</b> , an Emergency Response Plan that addresses 24-hour medical evacuation, fire response, hazardous chemical and fuel spill response, and security. The Emergency Response Plan must include, but not be limited to:  a) the scope of the plan detailing the Project infrastructure and facilities, geographic areas, and time periods covered by the plan; b) training and orientation requirements of company and contractor staff; c) an inventory of petroleum products, chemicals, and other hazardous substances that will be transported, stored and/or used prior to and during construction, as well as the locations where the Material Safety Data Sheets for each of these products will be kept; d) storage facilities and locations of the above-inventoried products and substances; e) identification of resources (e.g., equipment, contractors, and staff) to be on-site and/or available to respond to emergencies; f) identification of mutual aid partners and the location of their resources (e.g., equipment and staff) available to respond to emergencies; g) procedures for responding to spills, releases, fires, medical emergencies, and security issues, including the incident reporting and notification system; h) location of fire and spill response equipment stores and the spill kit requirements to be located in vehicles; i) a phone list of company, contractor, government authority, and community representatives outlining their respective roles and information needs; j) clean-up and disposal procedures for generated wastes; k) identification of muster points for emergency evacuations from camps and facilities;					90

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
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	<ul style="list-style-type: none"> <li>l) location of emergency medical treatment locations and capabilities;</li> <li>m) the requirement for 24-hour emergency medical evacuation capability;</li> <li>n) maps showing the location of the right-of-way and infrastructure such as camps, access roads, material storage areas, and borrow pits to facilitate the dispatch of first responders; and</li> <li>o) an explanation of how potential geological, meteorological, and geographical hazards are included in the plan.</li> </ul>					
91-93	<p><b>Technology and site-specific mitigation related to emergency preparedness and response<sup>4</sup></b></p> <p>Northern Gateway must file with the NEB, <b>at least 90 days prior to commencing construction</b>, an assessment of emergency preparedness and response technology and site-specific mitigation discussed in the Project application and in the OH-4-2011 proceeding, and the locations where this technology and mitigation will be used or a rationale for not using them.</p>		91	92	93	
94-97	<p><b>Protection and management plan for post-AD 1846 culturally-modified trees (CMTs)</b></p> <p>Northern Gateway must file with the NEB, <b>at least 90 days prior to commencing construction</b>, a plan to protect and manage post-AD 1846 CMTs within the British Columbia portion of the Project. The plan must include:</p> <ul style="list-style-type: none"> <li>a) the methods for surveying or inventorying potentially-affected CMT sites at locations to be disturbed by construction;</li> <li>b) results of pre-construction surveys or inventories of CMT sites;</li> <li>c) an assessment of the potential impacts to identified CMTs;</li> <li>d) a description of mitigation measures to reduce or eliminate potential impacts to identified CMTs;</li> <li>e) a summary of Northern Gateway's consultation with potentially-affected Aboriginal groups regarding the protection and management plan. This summary must include: <ul style="list-style-type: none"> <li>i) a description of any agreements or protocols regarding CMTs developed with potentially-affected Aboriginal groups;</li> <li>ii) any issues or concerns raised by those consulted with regarding the plan, and how Northern Gateway has addressed those issues or concerns; and</li> <li>iii) a list of outstanding issues or concerns, an explanation as to why these remain outstanding, and the steps that Northern Gateway will take to address any outstanding issues or concerns; and</li> </ul> </li> <li>f) a description of how Northern Gateway has incorporated mitigation measures into its EPMPs for the Project (required by Conditions 48-51).</li> </ul>	94	95	96	97	
98-100	<p><b>Acid rock drainage monitoring and follow-up program</b></p> <p>Northern Gateway must develop and implement a follow-up program to determine the post-construction water quality of groundwater drainage from the portals of the Hoult and Clore tunnels, acid rock drainage from the associated acid rock storage sites, and the</p>		98	99	100	

<sup>4</sup> The purpose of this condition is to demonstrate that Northern Gateway is being proactive in researching technology and site-specific mitigation for the pipelines and Kitimat Terminal related to emergency preparedness and response. Examples include, but are not limited to, trajectory models for emergency response, off-channel diversion ponds, and floating hydrocarbon sensors in watercourses.

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		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<p>receiving water bodies.</p> <p>Additionally, Northern Gateway must file with the NEB:</p> <ul style="list-style-type: none"> <li>a) for approval, <b>at least 90 days prior to commencing construction</b>, a description of the follow-up program as committed to in Volume 6A of the Project application including a schedule for reporting results to the NEB;</li> <li>b) <b>based on the NEB-approved schedule referred to in a)</b>, the results of the follow-up program, including monitoring results, an evaluation of the environmental assessment predictions and effectiveness of mitigation, and a discussion of any adaptive management measures necessary.</li> </ul>					
101-104	<p><b>Surveys and mitigation for rare plants and rare ecological communities</b></p> <p>Northern Gateway must undertake spring, summer, and fall field surveys for rare plants and rare ecological communities. Survey design and sampling methods must consider the availability of unique habitats to support rare species or ecological communities. Northern Gateway must file with the NEB, <b>at least 90 days prior to commencing construction</b>:</p> <ul style="list-style-type: none"> <li>a) the results of the spring, summer, and fall field surveys;</li> <li>b) confirmation that the Vegetation Protection and Management Plan, as referenced in the EPMP (required by Conditions 48-51), has been or will be updated to include: <ul style="list-style-type: none"> <li>i) detailed mitigation measures to be implemented for species potentially affected during construction;</li> <li>ii) a monitoring survey protocol for post-construction reclamation;</li> <li>iii) the methods for determining the extent of non-avoidable impacts on rare (including those listed under all Schedules of the <i>Species at Risk Act</i>) plants and rare ecological communities; and</li> <li>iv) a plan for the provision of offset measures for all non-avoidable impacts on rare plants and rare ecological communities, including criteria that will be used to assess the effectiveness of the offset measures;</li> </ul> </li> <li>c) a description of how available and applicable Aboriginal Traditional Knowledge and TLU studies have been taken into consideration in developing the surveys and mitigation; and</li> <li>d) a summary of Northern Gateway's consultation with Environment Canada, other appropriate federal and provincial authorities, other appropriate stakeholders, and potentially-affected Aboriginal groups regarding Northern Gateway's proposed rare plant and ecological communities surveys and mitigation. This summary must include any issues or concerns raised by those consulted with regarding the surveys and mitigation, and how Northern Gateway has addressed or responded to those issues or concerns.</li> </ul>	101	102	103	104	
105-108	<p><b>Construction safety manuals</b></p> <p>Northern Gateway must file, <b>at least 90 days prior to commencing construction</b>, construction safety manuals for the applicable Project components. Filings for the pipeline must include separate construction safety manuals for pipeline construction, station construction, and tunnel construction, which includes the fabrication and installation of pipeline facilities within the tunnels.</p> <p>These manuals must address normal construction activities, as well as blasting, avalanche safety, and special access road procedures which may be required in areas subject to activities other than Project construction (e.g., logging).</p>	105	106	107	108	

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
109-111	<p><b>Updated engineering alignment sheets and drawings</b></p> <p>Northern Gateway must file with the NEB, <b>at least 90 days prior to commencing construction</b>, updated engineering alignment sheets and drawings and, as they become available and prior to their implementation, any modifications to those sheets and drawings.</p>		109	110	111	
112-113	<p><b>Complementary leak detection systems</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least 90 days prior to commencing construction</b>, a report that includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>a) a description of the methods and conclusions of the investigations conducted by Northern Gateway for the complementary leak detection technologies described during the OH-4-2011 proceeding;</li> <li>b) a description of the complementary leak detection systems Northern Gateway has decided to implement and the reasons why; and</li> <li>c) a timetable for installing and implementing the chosen complementary leak detection systems.</li> </ul>		112	113		
114-117	<p><b>Heritage resources</b></p> <p>Northern Gateway must file with the NEB, <b>at least 60 days prior to commencing construction (in the case of the pipeline, prior to commencing construction of each spread or segment)</b>:</p> <ul style="list-style-type: none"> <li>a) copies of correspondence from the Alberta Department of Culture and the British Columbia Ministry of Forests, Lands and Natural Resource Operations confirming that Northern Gateway has obtained all of the required archaeological and heritage resource permits and clearances;</li> <li>b) a statement on how Northern Gateway will meet any conditions and respond to any comments and recommendations contained in the permits and clearances referred to in a); and</li> <li>c) a description of how Northern Gateway has incorporated any additional mitigation measures into its EPMPs for the Project (required by Conditions 48-51) as a result of any conditions or recommendations referred to in a).</li> </ul>	114	115	116	117	
118	<p><b>Landowner consultation</b></p> <p>Northern Gateway must maintain a record of its consultations with landowners that includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>a) a description of any landowner consultations undertaken, including the method of consultation, dates, and a summary of any comments or concerns raised by landowners; and</li> <li>b) a summary of actions undertaken by Northern Gateway to address each of the comments or concerns raised by landowners, or an explanation why any actions were not taken, and any outstanding concerns.</li> </ul> <p>Northern Gateway must file with the NEB for approval, <b>beginning at least 60 days prior to commencing construction, and every six months after commencing construction for the duration of the construction period</b>, its records of consultations. Northern Gateway must also file its records of consultations <b>every six months for five years after commencing Project operations</b>.</p>					118

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
119	<p><b>Landowner complaint records</b></p> <p>Northern Gateway must create and maintain records to chronologically track landowner complaints related to the Project. These records must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) the date the complaint was received;</li> <li>b) how the complaint was received (e.g., telephone, letter, email, etc.);</li> <li>c) subsequent dates of all contacts or correspondence;</li> <li>d) records of any site visits, monitoring, or inspections;</li> <li>e) contact information for all parties involved in the complaint;</li> <li>f) a detailed description of the complaint;</li> <li>g) the date of resolution of the complaint;</li> <li>h) if complaints remain unresolved, a description of any further actions to be taken or an explanation why no further action is required; and</li> <li>i) an explanation of how future complaints of a similar nature may be prevented.</li> </ul> <p>Northern Gateway must file with the NEB for approval, <b>beginning at least 60 days prior to commencing construction, and every six months after commencing construction for the duration of the construction period</b>, its landowner complaint records. Northern Gateway must also file its landowner complaint records <b>every six months for five years after commencing Project operations</b>. Northern Gateway must also make landowner complaint records available to applicable landowners upon request.</p>					119
120-123	<p><b>Project organizational structure</b></p> <p>Northern Gateway must file with the NEB, <b>at least 60 days prior to commencing construction</b>, a diagram of the Project's organizational structure (i.e., project management, design, and field staff) that clearly identifies roles, accountabilities, responsibilities, and reporting relationships for the applicable Project component.</p>	120	121	122	123	
124-125	<p><b>Specifications for field-applied coatings</b></p> <p>Northern Gateway must file with the NEB, <b>at least 60 days prior to commencing construction</b>, its specifications for field-applied coatings.</p>		124	125		
126	<p><b>Implementation and monitoring of, and compliance with, Marine Voluntary Commitments and the TERMPOL Review Committee</b></p> <p>Northern Gateway must file with the NEB, <b>at least 30 days prior to commencing construction</b>, a plan stating how it intends to implement, monitor, and ensure compliance with its Marine Voluntary Commitments and the recommendations of the TERMPOL Review Committee.</p> <p>The plan must include a summary of Northern Gateway's consultation with Transport Canada and the Canadian Coast Guard regarding</p>					126

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	the plan. This summary must include any issues or concerns raised by those consulted with regarding the plan and how Northern Gateway has addressed or responded to those issues or concerns.					
127-129	<p><b>Preparation of emergency preparedness and response planning documents</b></p> <p>Northern Gateway must file with the NEB, <b>at least 30 days prior to commencing construction</b>, a plan for preparing the following documents:</p> <ul style="list-style-type: none"> <li>a) General Oil Spill Response Plan;</li> <li>b) Pipeline Oil Spill Response Plan;</li> <li>c) Kitimat Terminal Oil Spill Response Plan;</li> <li>d) Marine Oil Spill Response Plan; and</li> <li>e) all related and accompanying plans such as Tactical Watercourse Plans, Pre-SCAT (Shoreline Clean-Up Assessment Technique) and River Substrate Surveys, Response Tactics for Floating Oil, Response Tactics for Submerged and Sunken Oil, Control Points, Access Plans, Geographic Response Plans, an Oil Pollution Prevention Plan, and an Oil Pollution Emergency Plan.</li> </ul> <p>The plan must include, but not be limited to, the following information in relation to the above documents:</p> <ul style="list-style-type: none"> <li>i) steps to be undertaken in completing them;</li> <li>ii) approximate timing for completion;</li> <li>iii) interested parties that will be consulted; and</li> <li>iv) a description of all federal and provincial regulations that need to be adhered to.</li> </ul>		127	128	129	
130-131	<p><b>Freshwater Fish and Fish Habitat Compensation Plan</b></p> <p>Northern Gateway must file with the NEB, <b>at least 30 days prior to commencing construction</b>, a final Freshwater Fish and Fish Habitat Compensation Plan for the pipeline right-of-way. In addition to the plan, this submission must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) a letter of approval of the plan from Fisheries and Oceans Canada; and</li> <li>b) a summary of Northern Gateway's consultation with Fisheries and Oceans Canada, other appropriate stakeholders, and potentially-affected Aboriginal groups regarding the Freshwater Fish and Fish Habitat Compensation Plan. This summary must include any issues or concerns raised by those consulted with regarding the plan and how Northern Gateway has addressed or responded to those issues or concerns.</li> </ul>		130	131		
132	<p><b>Marine Habitat Compensation Plan</b></p> <p>Northern Gateway must file with the NEB, <b>at least 30 days prior to commencing construction</b>, the final Marine Habitat Compensation Plan. In addition to the plan, this submission must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) a letter of approval of the plan from Fisheries and Oceans Canada; and</li> <li>b) a summary of Northern Gateway's consultation with Fisheries and Oceans Canada, other appropriate stakeholders, and potentially-</li> </ul>				132	

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	affected Aboriginal groups regarding the Marine Habitat Compensation Plan. This summary must include any issues or concerns raised by those consulted with regarding the plan and how Northern Gateway has addressed or responded to those issues or concerns.					
133	<p><b>Post-construction environmental monitoring methods</b></p> <p>Northern Gateway must file with the NEB, <b>at least 30 days prior to commencing construction</b>:</p> <ul style="list-style-type: none"> <li>a) the methods for conducting post-construction environmental monitoring for all terrestrial and freshwater areas disturbed during construction;</li> <li>b) the criteria to be used for evaluating reclamation success; and</li> <li>c) a summary of Northern Gateway's consultation with Fisheries and Oceans Canada, Environment Canada, the British Columbia Ministry of Environment, and Alberta Environment regarding the post-construction environmental monitoring methods and criteria. This summary must include any issues or concerns raised by those consulted with regarding the methods and criteria and how Northern Gateway has addressed or responded to those issues or concerns.</li> </ul>					133
134	<p><b>Secondary containment at Kitimat Terminal</b></p> <p>Northern Gateway must construct the secondary containment at Kitimat Terminal such that its capacity can accommodate six times the volume of the largest tank in the tank farm. It must also provide accommodation for peak precipitation, and have allowances for potential future tanks and for water generated from potential firefighting activities. Northern Gateway must file with the NEB, <b>at least 30 days prior to commencing construction</b>, written confirmation that its design incorporates this requirement.</p>				134	
<b>Phase: Prior to commencing operations / during construction</b>						
135	<p><b>Construction progress reports</b></p> <p>Northern Gateway must file with the NEB, <b>on a monthly basis</b> and in a form satisfactory to the NEB, construction progress reports. The reports must include information on the progress of activities carried out during the reporting period. These reports must include safety, environmental, and security non-compliances which occurred during each reporting period and the measures undertaken for the resolution of those non-compliances. It must also include a description of any changes made to geohazard mitigation measures, the location of any pressure tests carried out during the reporting period, and a description of any unsuccessful pressure tests and their cause.</p>					135
136-138	<p><b>Quality assurance and control plans and procedures</b></p> <p>Northern Gateway must file <b>monthly summary reports during construction</b> outlining non-conformances with its design, materials, and construction specifications, as well as the disposition of these non-conformances.</p>		136	137	138	

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		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
139	<p><b>Aboriginal, local, and regional employment monitoring reports</b></p> <p>Northern Gateway must file with the NEB, <b>within three months after commencing construction, and every six months thereafter until completing construction</b>, monitoring reports for Aboriginal, local, and regional employment for the Project. The reports must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) a summary of the elements or indicators monitored;</li> <li>b) a summary and analysis of Aboriginal, local, and regional employment during the reporting period for the Project, including: <ul style="list-style-type: none"> <li>i) progress made toward meeting Northern Gateway's commitment of 15 per cent Aboriginal employment;</li> <li>ii) an explanation why the 15 per cent Aboriginal employment commitment may not have been met; and</li> <li>iii) any proposed measures to address potential gaps or barriers in meeting the 15 per cent Aboriginal employment commitment; and</li> </ul> </li> <li>c) a summary of Northern Gateway's consultation with relevant Aboriginal, local, and regional communities; and industry groups or representatives regarding employment for the reporting period. This summary must include any issues or concerns raised by those consulted with regarding employment and how Northern Gateway has addressed or responded to those issues or concerns.</li> </ul> <p>Northern Gateway must file with the NEB, <b>within six months after completing construction</b>, a final report.</p>					139
140	<p><b>Aboriginal contracting and procurement monitoring reports</b></p> <p>Northern Gateway must file with the NEB, <b>within three months after commencing construction, and every six months thereafter until completing construction</b>, monitoring reports for Aboriginal contracting and procurement for the Project. The reports must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) a summary of the elements or indicators monitored;</li> <li>b) a summary and analysis of Aboriginal contracting and procurement opportunities awarded or active during the reporting period for the Project, including: <ul style="list-style-type: none"> <li>i) progress made toward meeting Northern Gateway's commitment for \$300 million for Aboriginal contracting and procurement; and</li> <li>ii) any proposed measures to address identified or potential gaps or barriers in meeting the \$300 million commitment for Aboriginal contracting and procurement; and</li> </ul> </li> <li>c) a summary of Northern Gateway's consultation with relevant Aboriginal groups, businesses, and individuals regarding Aboriginal contracting and procurement for the reporting period. This summary must include any issues or concerns raised by those consulted with regarding Aboriginal contracting and procurement and how Northern Gateway has addressed or responded to those issues or concerns.</li> </ul> <p>Northern Gateway must file with the NEB, <b>within six months after completing construction</b>, a final report.</p>					140

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		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
141	<p><b>FLC – annual report</b></p> <p>Northern Gateway must file with the NEB, <b>at the end of each calendar year after commencing in-water construction for Kitimat Terminal, and for the operational life of the Project</b>, an annual report outlining the activities, recommendations, and outcomes of the FLC. The reports must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) a description of FLC members for each year;</li> <li>b) a summary of key activities of the committee, including all recommendations made by the FLC;</li> <li>c) a description of how each recommendation was implemented or, if any recommendations were not implemented, an explanation why not;</li> <li>d) a summary of any issues brought forward for dispute resolution, including the groups or parties involved, and how any issues or disputes were resolved;</li> <li>e) a summary of any unresolved issues, including an explanation as to why these remain outstanding, and any steps required to ensure they are resolved to the extent possible;</li> <li>f) a summary of compensation protocols; and</li> <li>g) the measured outcomes of each goal established under the FLC operational guidelines (required by Condition 52).</li> </ul>				141	
142-143	<p><b>Watercourse crossing contingency plans</b></p> <p>Northern Gateway must file with the NEB either:</p> <ul style="list-style-type: none"> <li>a) <b>upon successful completion of each trenchless watercourse crossing</b>, confirmation of its completion; or</li> <li>b) in the event of any changes to a proposed trenchless watercourse crossing, file with the NEB for approval, <b>at least 21 days prior to constructing the crossing</b>: <ul style="list-style-type: none"> <li>i) notification of any such change(s) and the rationale for the change(s);</li> <li>ii) detailed design drawings and plans for the contingency crossing method to mitigate environmental or safety concerns, including the design flood level, calculated vertical and lateral scour potential, proposed mitigation measures, amended reclamation and re-vegetation measures, and fish and fish habitat monitoring for the affected watercourse crossing;</li> <li>iii) a description of how available and applicable Aboriginal Traditional Knowledge and TLU studies have been taken into consideration in developing the contingency plans; and</li> <li>iv) a summary of Northern Gateway's consultation with Fisheries and Oceans Canada, Environment Canada, the British Columbia Ministry of Environment, and Alberta Environment regarding the design of the proposed contingency crossing. This summary must include any issues or concerns raised by those consulted with regarding the design and how Northern Gateway has addressed or responded to those issues or concerns.</li> </ul> </li> </ul>		142	143		
144-145	<p><b>Construction outside of least risk periods</b></p> <p>For each watercourse crossing where construction is to occur outside the established or accepted provisional least risk period, Northern</p>		144	145		

# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<p>Gateway must:</p> <ul style="list-style-type: none"> <li>a) where a trenchless crossing is proposed, notify the NEB <b>at least 15 days prior to constructing the crossing</b>; or</li> <li>b) where a trenched crossing is proposed, file with the NEB for approval, <b>at least 60 days prior to constructing the crossing</b>: <ul style="list-style-type: none"> <li>i) the rationale for constructing outside of the least risk period;</li> <li>ii) a detailed watercourse crossing plan, including proposed timing and any additional mitigation measures that will be applied; and</li> <li>iii) a summary of Northern Gateway's consultation with Fisheries and Oceans Canada, the British Columbia Ministry of Environment, and Alberta Environment regarding the proposed schedule and design of the crossing. This summary must include any issues or concerns raised by those consulted with regarding the schedule and design and how Northern Gateway has addressed or responded to those issues or concerns.</li> </ul> </li> </ul>					
146	<p><b>Reporting on the Construction Marine Mammal Protection Plan</b></p> <p>Northern Gateway must file with the NEB, <b>on or before 31 December of each year for the duration of the Kitimat Terminal construction period</b>, a report(s) outlining the results of the monitoring activities referred to in the Construction Marine Mammal Protection Plan (required by Condition 74) during the year of filing.</p>				146	
147	<p><b>Financial assurances – operations phase</b></p> <p>Northern Gateway must prepare and file with the NEB for approval, <b>at least 18 months prior to applying for leave to open</b>, a financial assurances plan that includes details of the financial resources and secured sources of funds that will be capable of covering the costs of liabilities for, without limitation, clean-up, remediation, and other damages emanating from Project operations. These costs may arise from, among other things, potential accidents, malfunctions, and failures during the operations phase of the Project, including all large oil spills<sup>5</sup> originating from the oil and condensate pipelines and Kitimat Terminal, up to and including those that have the potential of being a catastrophic event.</p> <p>The financial assurances plan must be submitted and signed by an officer of Northern Gateway, verifying that it is accurate, complete, and, at a minimum, meets the criteria and coverage levels detailed below.</p> <p><b>(a) Criteria for financial assurance instruments and plan</b></p> <ul style="list-style-type: none"> <li>• Any financial or insurance instruments included in the financial assurance plan for the purpose of covering the costs of liabilities for, without limitation, clean-up, remediation, and other damages must be dedicated for this purpose and unfettered by pre-existing claims, including those of creditors, and draws from limited partners.</li> <li>• Any letter of credit that forms part of the financial assurances plan must be unconditional and irrevocable, segregated from other business activities of the partnership, and be dedicated to providing funds to cover the costs of liabilities for, without</li> </ul>				147	

<sup>5</sup> The Joint Review Panel considers a large oil spill to be one in which the estimated clean-up costs, excluding the costs of environmental goods and services, would be \$15 million or greater.

# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<p>limitation, clean-up, remediation, and other damages.</p> <ul style="list-style-type: none"> <li>Third party liability insurance must be stand-alone, current, and broad respecting the scope of environmental damages covered by the policy (i.e., only exceptional/non-standard perils, taking into account the nature and scope of the Project, would be excluded from coverage). Such insurance must be structured on a multi-year basis, recognizing potential loss of income by persons sustaining damage caused by Northern Gateway, over a reasonable number of years after the event.</li> <li>A portion of cash reserves or a portion of future cash flows of the Project may be included as instruments in the financial assurance plan, provided they are secured by a commitment letter from a senior officer of the general partner confirming that the funds will be dedicated to the financial assurances plan without restrictions for the period specified by the officer.</li> <li>Immediately after a catastrophic event, the sale of the Project's assets will not be eligible as financial assurance instruments in Northern Gateway's financial assurances plan unless Northern Gateway intends to abandon the facilities rather than continuing to use them as part of the operating Project.</li> <li>Parental and other third party guarantors must be registered within a Canadian jurisdiction and should have financial strength that is demonstrated in balance sheet values and ratios and credit ratings. For example, total assets less total liabilities of the guarantor should be several multiples of the liability assumed in the Northern Gateway guarantee.</li> </ul> <p><b>(b) Financial assurance components and coverage levels</b></p> <p>Northern Gateway's financial assurances plan must provide a total coverage of \$950 million<sup>6</sup> for the costs of liabilities for, without limitation, clean-up, remediation, and other damages emanating from Project operations, and the plan should include the following components and minimum coverage levels:</p> <ul style="list-style-type: none"> <li><b>Ready cash: Within 10 business days after a large spill from any Project component</b>, Northern Gateway should have unfettered access to at least \$100 million of funds that are available to cover costs, including compensation to third parties for losses and damages in the near term, while insurance claims are being processed. Once used, this source of cash must be replenished immediately to cover the costs of a potential future spill.</li> <li><b>Core coverage</b>: Put in effect and maintain current at all times a core financial coverage of at least \$600 million that includes third party, stand-alone liability insurance and other financial assurance instruments deemed appropriate.</li> <li><b>Financial backstopping for costs that exceed the payout of all other components in the plan</b>: Financial backstopping arrangements, such as parental and other third party guarantees and no fault insurance, must be in place for a minimum capacity of \$250 million. The intent of this arrangement would be to fill any shortfall in the core coverage.</li> </ul> <p>Listed below are some illustrative financial and insurance instruments that could potentially be candidates for the financial assurances plan:</p> <ul style="list-style-type: none"> <li>irrevocable, unfettered letter of credit;</li> </ul>					

<sup>6</sup> The Joint Review Panel arrived at the proposed coverage level based on information on the public record. Specific factors considered include potential spill quantities, spill location (such as high consequence areas), and potential unit costs for liabilities including clean-up, remediation and other damages on a per barrel basis.

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<ul style="list-style-type: none"> <li>• secured line of credit;</li> <li>• some cash reserves held by the general partner and not distributed to the limited partners (and verifiable on the balance sheet of the limited partnership);</li> <li>• some internal cash flow, including up to one year under force majeure conditions per Article 15 of the TSA, committed by the general partner in the limited partnership to financial assurances;</li> <li>• incremental revenues from a toll surcharge to cover operating expenses arising from environmental issues per Section 7(g) of the Toll Principles;</li> <li>• third party liability insurance with exemptions for only exceptional/non-standard perils;</li> <li>• no fault third party liability insurance;</li> <li>• parental and other third party guarantees provided by parties demonstrating financial strength through balance sheets and credit ratings, and</li> <li>• other instruments developed by Northern Gateway and the insurance and financial markets.</li> </ul> <p><b>Should there be a change in any instrument in the financial assurances plan that results in Northern Gateway no longer meeting the criteria and coverage levels outlined in this condition</b>, Northern Gateway must <b>immediately</b> notify the NEB of the steps that are being, or have been, taken to ensure there is sufficient coverage in the financial assurances plan.</p> <p>Northern Gateway must file with the NEB, <b>at least 18 months prior to applying for leave to open, and every fifth year after commencing operations</b>, a report from an independent third party assessing the financial assurances plan and its key components against the criteria and actual experiences of damage claims. The report should summarize the key features of each financial and insurance instrument proposed for inclusion in the financial assurances plan. The report should include verification of any third party liability insurance coverage, a copy of the insurance certificate, and a summary of the key features of the insurance policy. This summary should include, but not be limited to: limits on insurance coverage, deductible amounts, the risks and perils and properties covered by the insurance policy, the exclusions from coverage, Northern Gateway's obligations, effective dates, and names of insurers and reinsurers.</p> <p><b>Should a large oil spill event occur more than two years before the second or later reports are due</b>, Northern Gateway must file with the NEB for information purposes, <b>within one year after the event</b>, a report that assesses the adequacy of its financial assurances plan and summarizes proposed changes, if any, to improve coverage.</p>					
148-150	<p><b>Offset Measures Plan for residual impacts to caribou habitat</b></p> <p>Northern Gateway must file with the NEB for approval, in accordance with the timelines below, a plan to offset all residual Project-related effects resulting from directly- and indirectly-disturbed caribou habitat, after taking into account the implementation of the EPMP and CHRP measures. The Offset Measures Plan must include:</p> <p>a) A preliminary version, to be filed <b>at least 90 days prior to applying for leave to open</b>, with the criteria and the measurable objectives of the plan, including, but not limited to, a discussion of:</p>	148	149	150		

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<ul style="list-style-type: none"> <li>i) an initial quantification of the area of caribou habitat directly and indirectly disturbed;</li> <li>ii) a list of the potential offset measures available;</li> <li>iii) the appropriate offset ratio for each potential measure;</li> <li>iv) the expected effectiveness of each offset measure;</li> <li>v) the relative value of each measure toward achieving the offset;</li> <li>vi) a conceptual decision-making tree(s) or process that will be used to select which specific offset measures and accompanying offset ratios will be used under what circumstances; and</li> <li>vii) how the actions undertaken in the Linear Feature Management and Removal Plan (required by Conditions 71-73) will relate to the Offsets Measures Plan.</li> </ul> <p>b) A final version, to be filed <b>on or before 1 February after the second complete growing season after commencing Project operations</b>, including, but not limited to:</p> <ul style="list-style-type: none"> <li>i) the preliminary Offset Measures Plan, with any updates identified in a revision log that includes the rationale for any changes;</li> <li>ii) a detailed decision-making tree(s) or process that will be used to select which specific offset measures and accompanying offset ratios will be used under what circumstances;</li> <li>iii) a complete tabular list of the offset measures and appropriate offset ratios to be implemented or already underway, including a description of site-specific details and maps showing the locations;</li> <li>iv) a schedule indicating when offset measures will be started and their estimated completion date;</li> <li>v) either an assessment of the effectiveness of the measures and their value in offsetting the residual effects, or a detailed plan for completing an assessment of the effectiveness and value of the offset; and</li> <li>vi) an update on the restoration success to support offset decisions.</li> </ul> <p>Both the preliminary and final versions of the plan must also include a summary of Northern Gateway's consultation with Environment Canada, appropriate provincial authorities, other appropriate stakeholders, and potentially-affected Aboriginal groups regarding the Offset Measures Plan. This summary must include a description of how available Aboriginal Traditional Knowledge and TLU studies have been taken into consideration in developing the plan, any issues or concerns raised by those consulted with regarding the plan and how Northern Gateway has addressed or responded to those issues or concerns.</p>					
151-152	<p><b>Column separation</b></p> <p>Northern Gateway must:</p> <ul style="list-style-type: none"> <li>a) identify locations having potential for slack line flow when the pipeline is operated at 100 per cent of its maximum operating pressure (MOP), 80 per cent of its MOP and 50 per cent of its MOP;</li> <li>b) install pressure transmitters at the high points identified;</li> </ul>		151	152		

# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<ul style="list-style-type: none"> <li>c) provide alarms for the pipeline operators to provide warnings when these conditions may occur;</li> <li>d) develop operating procedures that require operating the pipeline in a manner that prevents column separation; and</li> <li>e) file with the NEB, <b>prior to applying for leave to open</b>, written confirmation that the requirements of a) to d) have been met.</li> </ul>					
153-155	<p><b>Field Changes Manual for geohazard mitigation</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least 90 days prior to commencing pipe-laying activities</b>, a Field Changes Manual for geohazard mitigation. This manual must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) decision criteria for implementing mitigation for any geohazards identified during construction;</li> <li>b) specific criteria for implementing changes to the designs, grading, special materials, protective structures, increased burial depth, installation procedures, erosion mitigation measures, and monitoring as specified in the Geohazard Assessment, Mitigation, and Monitoring Report (required by Conditions 75-77); and</li> <li>c) details regarding the required qualifications of its field staff that are implementing the manual.</li> </ul>		153	154	155	
156-158	<p><b>Pressure Testing Program</b></p> <p>Northern Gateway must pressure test the Project facilities with a liquid medium and file with the NEB for approval, <b>at least 90 days prior to commencing pressure testing</b>, the Pressure Testing Program that demonstrates compliance with applicable codes, standards, and regulatory requirements.</p>		156	157	158	
159-161	<p><b>Non-destructive examination (NDE) of final tie-in welds</b></p> <p>Northern Gateway must delay NDE of final tie-in welds <b>for 48 hours following weld completion</b>. Northern Gateway must include this requirement in the NDE specification of its Joining Program (required by Conditions 35-37).</p>		159	160	161	
162-163	<p><b>Radiographer and ultrasonic technicians</b></p> <p>Northern Gateway must employ only Canadian General Standards Board-certified radiographers and ultrasonic technicians to operate the NDE inspection equipment, and for the final interpretation of radiographic film and the results of the ultrasonic inspection system. Northern Gateway must file with the NEB, <b>at least 30 days prior to commencing NDE operations</b>, written confirmation of compliance.</p>		162	163		
164	<p><b>Enhanced marine spill trajectory and fate modeling<sup>7</sup></b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least three years prior to commencing operations</b>, a plan to prepare enhanced marine spill trajectory and fate modeling for Kitimat Terminal and marine tanker traffic. The plan must include, but not be limited to:</p>				164	

<sup>7</sup> The purpose of this condition is to further refine Northern Gateway's marine spill trajectory and fate models to assist in spill response planning.

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<ul style="list-style-type: none"> <li>a) a summary of Northern Gateway's consultation with Environment Canada regarding the scope of work to be undertaken. This summary must include any issues or concerns raised by Environment Canada regarding the scope of work and how Northern Gateway has addressed or responded to those issues or concerns;</li> <li>b) the membership of a Scientific Advisory Committee and its Terms of Reference;</li> <li>c) a schedule for completing the work and confirmation that it will be completed prior to commencing operations;</li> <li>d) the scenarios to be modeled, which, at minimum, must include the same six scenarios in terms of locations and potential spill volumes included in Northern Gateway's modeling work referenced in Exhibit B3-22 (Volume 7C of the Project application, Section 9 - Examples for Response Planning), and Exhibit B3-42 (Volume 8C, Section 10 - Mass Balance Examples for Response Planning); and</li> <li>e) a detailed discussion of how Northern Gateway will include in its enhanced modeling the following: <ul style="list-style-type: none"> <li>i) stochastic calculations and visual representations;</li> <li>ii) how the model will be adapted to different physical characteristics of the oil that is intended to be shipped from Kitimat Terminal with particular reference to density, adhesion properties, and evaporation rates;</li> <li>iii) remobilization of oil from the shorelines due to tidal or other influences such as varying adhesion properties of the oil intended to be shipped from Kitimat Terminal, and oil retention times;</li> <li>iv) resurfacing of submerged or entrained oil;</li> <li>v) potential for oil to sink based on weathering and adhesion to sediment;</li> <li>vi) how weathering and trajectory models will be integrated to provide an accurate representation of the potential fate of oil within the environment;</li> <li>vii) how the models will be used at any time of the year and under varying meteorological and hydrological conditions; and</li> <li>viii) how the models will be used to inform spill response exercises and actual spill events.</li> </ul> </li> </ul>					
165	<p><b>Research program on behavior and clean-up of heavy oils<sup>8</sup></b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least three years prior to commencing operations</b>, a plan to lead a research program regarding the behavior of heavy oils spilled in freshwater and marine aquatic environments. The plan must include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>a) the funding required to ensure the research program developed is undertaken and concluded within a specified funding period, with details concerning: <ul style="list-style-type: none"> <li>i) the level and duration of funding contributed by Northern Gateway; and</li> <li>ii) the levels and duration of funding from other sources;</li> </ul> </li> <li>b) a plan for consulting with the NEB, Environment Canada, Transport Canada, the Canadian Coast Guard, the Province of British</li> </ul>					165

<sup>8</sup> The purpose of this condition is to assist in spill response planning and to contribute to further understanding of the behavior and clean-up of heavy oil spills in marine and fresh water environments.

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	<p>Columbia, and any other stakeholders that Northern Gateway will consult with, including Aboriginal groups;</p> <p>c) the membership of a Scientific Advisory Committee and its Terms of Reference;</p> <p>d) topics to be addressed through the research including varying physical and chemical properties of the oil intended to be shipped from Kitimat Terminal, product weathering, dispersion and oil/sediment interactions, product submergence, product behavior and clean-up following in situ burning, and clean-up and remediation options for sediments and shoreline;</p> <p>e) the scope, objectives, methods, and timeframe for the research topics as they pertain to both laboratory and field work;</p> <p>f) how Northern Gateway will incorporate the results of the research into its enhanced marine spill fate and trajectory models;</p> <p>g) how Northern Gateway will incorporate the results of the research into its emergency preparedness and response plans; and</p> <p>h) how Northern Gateway will make the results of the research available to spill responders and relevant government authorities in the event of a spill.</p>					
166	<p><b>Annual research program progress reports</b></p> <p>Northern Gateway must file with the NEB, <b>on or before 31 December of each year for the duration of the research program on behavior and clean-up of heavy oils</b> (required by Condition 165), a progress report that demonstrates the extent to which the objectives of the research program have been achieved and includes, but is not limited to:</p> <p>a) an update on timing and the status of the work undertaken that year;</p> <p>b) results and preliminary results from research conducted during the year of filing;</p> <p>c) work to be undertaken in the upcoming year; and</p> <p>d) any other matters that Northern Gateway wants to bring to the NEB's attention related to the research project.</p>					166
167	<p><b>Consultation on emergency preparedness and response with interested parties</b></p> <p>Northern Gateway must file with the NEB, <b>at least three years prior to commencing operations</b>, a plan for consulting on emergency preparedness and response for the pipeline and Kitimat Terminal. This plan must include, but not be limited to:</p> <p>a) the scope of the consultation plan;</p> <p>b) objectives of the consultation plan;</p> <p>c) a preliminary list of regulatory authorities to be consulted;</p> <p>d) a preliminary list of communities and Aboriginal groups to be consulted;</p> <p>e) a preliminary identification of consultation locations and timing; and</p> <p>f) the methods to track consultation commitments and incorporation into final Emergency Preparedness and Response Plans.</p>					167
168	<p><b>Emergency Preparedness and Response Exercise and Training Program</b></p> <p>Northern Gateway must file with the NEB, <b>at least 18 months prior to commencing operations</b>, an Emergency Preparedness and Response Exercise and Training Program for the pipeline and Kitimat Terminal. The objective of the Emergency Preparedness and</p>					168

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<p>Response Exercise and Training Program is to demonstrate the continual improvement of competencies of Northern Gateway responders (including control centre personnel) at all levels of the company to prepare for, respond to, recover from, and mitigate the potential effects of emergencies of any type. The Emergency Preparedness and Response Exercise and Training Program must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) a defined scope, other objectives in addition to those noted above, and targets of the Emergency Preparedness and Response Exercise and Training Program that address Northern Gateway responder turn-over and ensure ongoing training and practice for Northern Gateway responders;</li> <li>b) a list of mandatory courses for Northern Gateway responders;</li> <li>c) how Northern Gateway will train its personnel to respond to all hydrocarbon spill scenarios in various seasons including, but not limited to, releases of hydrocarbons in mountain regions during winter conditions, into ice covered watercourses, and into watercourses under varying flow conditions;</li> <li>d) a schedule for tabletop and full-scale (i.e., field deployment) emergency response exercises for a variety of scenarios that will be conducted prior to operations, including, but not limited to, full-scale exercises that have been informed by prior tabletop exercises, for each of the following scenarios: <ul style="list-style-type: none"> <li>i) full bore rupture under ice and snow conditions in the Coastal Mountains;</li> <li>ii) full bore rupture into the Athabasca River under peak flow conditions;</li> <li>iii) full bore rupture into the Kitimat River during high spring flow conditions;</li> <li>iv) a 250 cubic metre release of condensate into Kitimat Arm as a result of a release from Kitimat Terminal; and</li> <li>v) a 250 cubic metre release of diluted bitumen into Kitimat Arm as a result of a release from Kitimat Terminal;</li> </ul> </li> <li>e) a plan for determining the schedule and frequency of emergency response exercises for a variety of scenarios during the operational life of the Project, including, but not limited to: <ul style="list-style-type: none"> <li>i) within two years of commencing operations, unannounced full-scale exercises for the five scenarios noted in d);</li> <li>ii) unannounced and planned exercises for drills, tabletop exercises, functional exercises, and full-scale exercises; and</li> <li>iii) the rationale for determining the schedule and frequency of emergency response exercises;</li> </ul> </li> <li>f) a learnings implementation plan for exercises that considers how the Emergency Preparedness and Response Plans and related documents will be updated and amended following exercises. The learnings implementation plan must consider three main purposes: <ul style="list-style-type: none"> <li>i) to validate plans;</li> <li>ii) to develop Northern Gateway responder (including control centre personnel) competencies and provide them with the opportunity to carry out and understand their roles in emergency response; and</li> <li>iii) to test Project-specific and well-established emergency preparedness and response procedures;</li> </ul> </li> <li>g) a plan for addressing the training requirements contained within the <i>Onshore Pipeline Regulations, 1999</i> (as amended from time to time) and associated documents, such as the NEB's 24 September 2002 letter <i>Security and Emergency Preparedness and Response</i></li> </ul>					

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		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<p><i>Programs</i> and the NEB's Notice of Proposed Regulatory Change 2011-01 - <i>Management Systems</i> (as amended or superseded from time to time); and</p> <p>h) confirmation that the Emergency Preparedness and Response Exercise and Training Program has been reviewed and assessed by a qualified and independent third party and that comments generated by that review and assessment have been considered and incorporated in the program.</p>					
169	<p><b>Filing of Marine Oil Spill Preparedness and Response Plans with Transport Canada, the Canadian Coast Guard, and Environment Canada</b></p> <p>Northern Gateway must file with the NEB, <b>at least one year prior to commencing operations</b>, confirmation that it has prepared its marine-related oil spill preparedness and response plans in accordance with its Framework for Marine Oil Spill Preparedness and that it has filed these plans for review and comment with Transport Canada, the Canadian Coast Guard, Environment Canada, and the Province of British Columbia. This confirmation must include a description of how Northern Gateway will address any comments or concerns noted by these parties.</p>					169
170-171	<p><b>Emergency Preparedness and Response Plan for the pipeline</b></p> <p>Northern Gateway must file with the NEB, <b>at least one year prior to commencing operations</b>, an Emergency Preparedness and Response Plan for the pipeline to verify compliance with Northern Gateway's commitments regarding Emergency Preparedness and Response, including its Framework for Pipeline Oil Spill Preparedness and the <i>Onshore Pipeline Regulations, 1999</i> (as amended from time to time). The plan must demonstrate Northern Gateway's ability to prepare for, respond to, recover from, and mitigate the potential effects of emergencies of any type and in any geographic region or season and must include, but not be limited to:</p> <p>a) the relevant emergency preparedness and response documents as follows:</p> <ul style="list-style-type: none"> <li>i) General Oil Spill Response Plan;</li> <li>ii) Pipeline Oil Spill Response Plan; and</li> <li>iii) all related and accompanying plans, as appropriate, such as Tactical Watercourse Plans, Pre-SCAT (Shoreline Clean-Up Assessment Technique) and River Substrate Surveys, Response Tactics for Floating Oil, Response Tactics for Submerged and Sunken Oil, Control Points, Access Plans, and Geographic Response Plans, etc.;</li> </ul> <p>b) an emergency response and preparedness table for the pipeline indicating which plans will be referred to in an emergency response for each ten kilometre-long segment of the pipeline. For each of these pipeline segments, the table must also identify, at a minimum:</p> <ul style="list-style-type: none"> <li>i) high consequence areas;</li> <li>ii) persons or groups potentially affected;</li> <li>iii) the available access to the right-of-way and to high consequence areas;</li> <li>iv) nearest control point(s);</li> <li>v) nearest available equipment cache;</li> </ul>		170	171		

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# Range	Potential Condition	Project component <sup>1</sup> (with condition #)				
		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	<ul style="list-style-type: none"> <li>vi) response times for equipment and personnel to the right-of-way and to high consequence areas;</li> <li>vii) geological, meteorological, and geographical hazards (e.g., snow avalanche, mud slides, rock slides, and steep slopes); and</li> <li>viii) site-specific technology and specialized mitigation (e.g., trajectory models for emergency response, off-channel diversion ponds, and hydrocarbon sensors) applicable to emergency response;</li> </ul> <p>c) how the plan conforms to requirements contained within the <i>Onshore Pipeline Regulations, 1999</i> (as amended from time to time) and associated documents, such as the NEB's 24 September 2002 letter <i>Security and Emergency Preparedness and Response Programs</i> and the NEB's Notice of Proposed Regulatory Change 2011-01 - <i>Management Systems</i> (as amended or superseded from time to time); and</p> <p>d) confirmation that the Emergency Preparedness and Response Plan has been reviewed and assessed by a qualified and independent third party and that comments generated by the review and assessment have been considered and incorporated in the plan.</p>					
172	<p><b>Emergency Preparedness and Response Plan for Kitimat Terminal</b></p> <p>Northern Gateway must file with the NEB, <b>at least one year prior to commencing operations</b>, an Emergency Preparedness and Response Plan for Kitimat Terminal to verify compliance with Northern Gateway's commitments regarding Emergency Preparedness and Response, including its Framework for Pipeline Oil Spill Preparedness and the <i>Onshore Pipeline Regulations, 1999</i> (as amended from time to time). The plan must demonstrate geographic familiarity with the area and the response needed to prepare for, respond to, recover from, and mitigate the potential effects of emergencies of any type and must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) the relevant emergency preparedness and response documents as follows: <ul style="list-style-type: none"> <li>i) General Oil Spill Response Plan;</li> <li>ii) Kitimat Terminal Oil Spill Response Plan; and</li> <li>iii) all related and accompanying plans, as appropriate, such as Tactical Watercourse Plans, Pre-SCAT (Shoreline Clean-Up Assessment Technique) Surveys, Response Tactics for Floating Oil, Response Tactics for Submerged and Sunken Oil, Control Points, Access Plans, Geographic Response Plans, etc.;</li> </ul> </li> <li>b) identification of high consequence areas;</li> <li>c) identification of affected parties;</li> <li>d) nearest available equipment caches;</li> <li>e) response times for equipment and personnel to the water and to high consequence areas;</li> <li>f) how trajectory models will be used in response planning and who will be responsible for running them;</li> <li>g) how the plan conforms to requirements contained within the <i>Onshore Pipeline Regulations, 1999</i> (as amended from time to time) and associated documents, such as the NEB's 24 September 2002 letter <i>Security and Emergency Preparedness and Response Programs</i> and the NEB's Notice of Proposed Regulatory Change 2011-01 - <i>Management Systems</i> (as amended or superseded from time to time); and</li> <li>h) confirmation that the Emergency Preparedness and Response Plan has been reviewed and assessed by a qualified and independent</li> </ul>				172	

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		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
	third party and that comments generated by the review and assessment have been considered and incorporated in the plan.					
173	<p><b>Operations Marine Mammal Protection Plan</b></p> <p>Northern Gateway must file with the NEB for approval, <b>at least six months prior to commencing operations</b>, an Operations Marine Mammal Protection Plan. The plan must be prepared in accordance with the Framework for the Marine Mammal Protection Plan submitted as part of the OH-4-2011 proceeding, and must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) all mitigation measures and monitoring activities of marine mammals to be implemented for the Project's operational life;</li> <li>b) a description of how available and applicable Aboriginal Traditional Knowledge and TLU studies have been taken into consideration in developing the plan;</li> <li>c) a summary of Northern Gateway's consultation with Fisheries and Oceans Canada, Transport Canada, other appropriate stakeholders, and potentially-affected Aboriginal groups regarding the plan. This summary must include any issues or concerns raised by those consulted with regarding the plan and how Northern Gateway has addressed or responded to those issues or concerns;</li> <li>d) a description of how Northern Gateway will determine the effectiveness of its mitigation measures; and</li> <li>e) a discussion of how research and monitoring results will be incorporated into the Operations Marine Mammal Protection Plan throughout the Project's operational life to adaptively manage potential effects on marine mammals.</li> </ul>					173
174-175	<p><b>Tunnel access control plan and safety systems</b></p> <p>Northern Gateway must file with the NEB, <b>at least six months prior to commencing operations</b>, a tunnel access control plan and a description of the safety systems to be installed in the tunnels for real-time monitoring of pipeline vibrations, temperature, air quality, fire, and gas.</p>		174	175		
176	<p><b>Availability of enhanced marine spill trajectory and fate models for spill responders</b></p> <p>Northern Gateway must file with the NEB, <b>at least 90 days prior to commencing operations</b>, a letter describing how it will make its enhanced marine spill trajectory and fate models for Kitimat Terminal and marine tanker traffic available to the following parties in the event of a spill:</p> <ul style="list-style-type: none"> <li>a) the NEB;</li> <li>b) Environment Canada;</li> <li>c) Transport Canada;</li> <li>d) the Canadian Coast Guard;</li> <li>e) the Province of British Columbia; and</li> <li>f) other parties, such as coastal Aboriginal groups, that form part of the Response Organization.</li> </ul>					176

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		Infrastructure <sup>2</sup>	Oil pipeline	Condensate pipeline	Kitimat Terminal	The Project <sup>3</sup>
177-178	<p><b>SCADA and leak detection system design</b></p> <p>Northern Gateway must file with the NEB, <b>at least 90 days prior to commencing operations</b>, a report describing the final design of the SCADA and leak detection systems for the pipeline. The report must include information suitable for establishing a baseline for the quality program for its SCADA and leak detection systems. The report must also include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) a description of the SCADA and leak detection systems;</li> <li>b) the locations and types of pressure, temperature and flow monitoring, control devices, and remote terminal units;</li> <li>c) the locations of remotely-operated valves;</li> <li>d) the target detectability (i.e., amounts leaked, time to detect, leakage rate);</li> <li>e) the target sensitivity (i.e., minimum leak size);</li> <li>f) the target reliability (i.e., false alarm rate, failure to alarm rate);</li> <li>g) the expected system robustness (i.e., system availability considering system operating conditions);</li> <li>h) the target accuracy (i.e., size and location of a detected leak); and</li> <li>i) a description of the quality program using both direct and inferred methods that Northern Gateway will implement during pipeline operations to ensure optimal performance.</li> </ul>		177	178		
179-180	<p><b>Overpressure protection</b></p> <p>Northern Gateway must install both pressure control valves and variable frequency drives at all of its pump stations and file with the NEB, <b>at least 30 days prior to commencing operations</b>, written confirmation of compliance.</p>		179	180		
<b>Phase: After commencing operations</b>						
181	<p><b>Ongoing implementation of Marine Voluntary Commitments and recommendations of the TERMPOL Review Committee</b></p> <p>Northern Gateway must file with the NEB, <b>on or before 1 June and 31 December of each year of operations for the life of the Project</b>, a report documenting its continued implementation of its Marine Voluntary Commitments and recommendations of the TERMPOL Review Committee, any non-compliances with these commitments and recommendations, and actions taken to correct these non-compliances. The report must be signed by an officer of the company.</p>					181
182	<p><b>Submission of final research program report</b></p> <p><b>Within six months after completing its research on behavior and clean-up of heavy oils</b> (required by Condition 165), Northern Gateway must file with the NEB, Environment Canada, Transport Canada, the Canadian Coast Guard, the Province of British Columbia, and other stakeholders, such as Aboriginal groups, that participated in the research, a final report that includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>a) the results of all research undertaken;</li> </ul>					182

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	<ul style="list-style-type: none"> <li>b) a discussion of how the findings will be used in spill response planning;</li> <li>c) how Northern Gateway will incorporate the results of the research into its marine spill fate and trajectory models and the timeframe for doing so; and</li> <li>d) how Northern Gateway will make the results of the research available to spill responders and relevant government authorities in the event of a spill.</li> </ul>					
183	<p><b>Caribou Habitat Restoration and Offset Measures Monitoring Program</b></p> <p>Northern Gateway must file with the NEB for approval, <b>on or before 1 February after the first complete growing season after commencing operations</b>, a program for monitoring and verifying the effectiveness of the caribou habitat restoration and offset measures implemented as part of the CHRP (required by Conditions 68-70) and Offset Measures Plan (required by Conditions 148-150). This program must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>a) the scientific methods or protocols for short-term and long-term monitoring of the restoration and offset measures, and the effectiveness of the measures;</li> <li>b) frequency, timing, and locations of monitoring and the rationale for each;</li> <li>c) protocols for how restoration and offset measures will be adapted, as required based on the monitoring results from the implementation of the program; and</li> <li>d) a schedule for filing reports of monitoring results and the adaptive management responses to the NEB, Environment Canada, and appropriate provincial authorities. Any changes to this schedule are to be included at the beginning of each monitoring report filed.</li> </ul>					183
184	<p><b>Caribou monitoring reports</b></p> <p>Northern Gateway must file with the NEB, <b>based on the schedule referred to in the Caribou Habitat Restoration and Offset Measures Monitoring Program</b> (required by Condition 183), a report(s) outlining the results of the monitoring program.</p>					184
185	<p><b>Post-Construction Environmental Monitoring Reports (terrestrial)</b></p> <p>Northern Gateway must file with the NEB, <b>on or before 31 January after each of the first, third, fifth, and tenth full growing seasons after completing reclamation and final clean-up</b> of all terrestrial and freshwater areas disturbed during construction, Post-Construction Environmental Monitoring Reports for each completed construction spread or work area. The reports must reflect any monitoring or follow-up program developed and must:</p> <ul style="list-style-type: none"> <li>a) assess the effectiveness of the mitigation measures applied during construction against the criteria for success;</li> <li>b) identify any deviations from plans and alternate mitigation applied;</li> <li>c) identify locations (e.g., on a map or diagram, in a table) where environmental issues arose during construction and where corrective actions were taken;</li> <li>d) identify the current status of the issues identified (resolved or unresolved);</li> <li>e) provide proposed measures and the schedule that Northern Gateway will implement to address any unresolved issues or concerns;</li> </ul>					185

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	and f) a summary of any comments received from Fisheries and Oceans Canada, Environment Canada, the British Columbia Ministry of Environment, Alberta Environment, and affected Aboriginal groups and stakeholders regarding issues identified in each report.					
186	<b>Reporting on the Operations Marine Mammal Protection Plan</b> Northern Gateway must file with the NEB, <b>on or before 31 December of each year, for the first five years of operations, and every five years thereafter, or until Northern Gateway provides a rationale satisfactory to the NEB that these reports are no longer required</b> , a report(s) outlining how the research and monitoring results referred to in the Operations Marine Mammal Protection Plan (required by Condition 173) has been incorporated in the plan during the year of filing.					186
187-188	<b>Quality program for the complementary leak detection systems</b> Northern Gateway must file with the NEB, <b>on or before 31 January of the first, third, fifth, and tenth full years after commencing operations</b> , a report describing the observed detectability, sensitivity, reliability robustness, and accuracy of Northern Gateway's complementary leak detection systems.		187	188		
189-190	<b>Quality program for the SCADA and leak detection systems</b> Northern Gateway must file with the NEB, <b>on or before 31 January of the first, third, and fifth full years after commencing operations, and every fifth year thereafter</b> , a report describing the results of Northern Gateway's quality program for its SCADA and leak detection systems and how identified issues were addressed.		189	190		
191	<b>Pipeline Environmental Effects Monitoring Program: monitoring results</b> Northern Gateway must file with the NEB, <b>on or before 31 December of each year for the duration of the Pipeline Environmental Effects Monitoring Program</b> (required by Conditions 13-15), a monitoring progress report that includes, but is not limited to: a) the current status of monitoring work identified as part of the Pipeline Environmental Effects Monitoring Program; b) results from monitoring conducted during the year of filing; c) monitoring work to be undertaken in the upcoming year; and d) a discussion of any monitoring results that, due to natural environmental variations, are outside the range of results expected.					191
192	<b>Marine Environmental Effects Monitoring Program: monitoring results</b> Northern Gateway must file with the NEB, <b>on or before 31 December of each year for the duration of the Marine Environmental Effects Monitoring Program</b> (required by Condition 22), a monitoring progress report that includes, but is not limited to: a) a comprehensive description of monitoring participation by relevant government authorities, participating Aboriginal groups, research organizations, and public stakeholder groups;					192

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	<ul style="list-style-type: none"> <li>b) current status of monitoring work identified as part of the Marine Environmental Effects and Monitoring Program;</li> <li>c) results from monitoring conducted during the year of filing;</li> <li>d) monitoring work to be undertaken in the upcoming year; and</li> <li>e) a discussion of any monitoring results that, due to natural environmental variations, are outside the range of results expected.</li> </ul>					
193-194	<p><b>Pipeline inspections</b></p> <p>Northern Gateway must conduct the following inspections for the pipeline, at the times indicated:</p> <ul style="list-style-type: none"> <li>a) a high resolution in-line caliper inspection (i.e., a GEOPIG™ inspection), to establish an accurate position of the pipeline and to detect pipe deformations <b>within six months after commencing operations</b>;</li> <li>b) an in-line ultrasonic crack detection inspection <b>within two years after commencing operations</b>;</li> <li>c) an in-line corrosion magnetic flux leakage inspection in both the circumferential and longitudinal directions <b>within two years after commencing operations</b>;</li> <li>d) an in-line ultrasonic wall measurement inspection <b>within two years after commencing operations</b>; and</li> <li>e) an above-ground coating survey <b>within two years after commencing operations</b>.</li> </ul> <p>Northern Gateway must investigate all dents greater than two per cent of pipe diameter to ensure they are free of gouges and not associated with a weld, and must report to the NEB, <b>within 30 days of the field investigation</b>, any injurious defects that were identified and repaired. Northern Gateway must file with the NEB, <b>within three years after commencing operations</b>, a report confirming completion of the surveys, investigations, and inspections.</p>		193	194		
195	<p><b>Emergency preparedness and response exercises</b></p> <ul style="list-style-type: none"> <li>a) For an exercise described in Northern Gateway's Emergency Preparedness and Response Exercise and Training Program (required by Condition 168), Northern Gateway must conduct the exercise with the objectives of testing: <ul style="list-style-type: none"> <li>i) emergency response procedures;</li> <li>ii) training of company personnel;</li> <li>iii) communications systems;</li> <li>iv) response equipment;</li> <li>v) safety procedures; and</li> <li>vi) the effectiveness of its liaison and continuing education programs.</li> </ul> </li> <li>b) For the life of the Project, Northern Gateway must notify the NEB, <b>at least 45 days prior to the date of each emergency response exercise</b>, of: <ul style="list-style-type: none"> <li>i) the date and location(s) of the exercise;</li> <li>ii) the objectives if different from those noted in a);</li> </ul> </li> </ul>					195

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	<ul style="list-style-type: none"> <li>iii) the participants in the exercise; and</li> <li>iv) the scenario for the exercise.</li> </ul> <p>c) Northern Gateway must file with the NEB, <b>within 60 days after each emergency response exercise described in a)</b>, a report on the exercise that includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>i) the results of the exercise;</li> <li>ii) areas for improvement; and</li> <li>iii) steps to be taken to correct deficiencies.</li> </ul>					
196	<p><b>Project completion</b></p> <p>Northern Gateway must file with the NEB, <b>within 30 days after commencing operations</b>, a confirmation, by an officer of the company, that the Project was completed and constructed in compliance with all applicable conditions in this Certificate. If compliance with any of these conditions cannot be confirmed, the officer of the company must file with the NEB details as to why compliance cannot be confirmed. The filing required by this condition must include a statement confirming that the signatory to the filing is an officer of the company.</p>					196
197-198	<p><b>Pipeline Geographic Information System (GIS) data</b></p> <p>Northern Gateway must file with the NEB, <b>within one year after commencing operations</b>, GIS data in the form of an ESRI shape file, and which contains centre lines of pipeline segments, where each segment has a unique outside diameter, wall thickness, MOP, external coating, field-applied girth weld coating, and pipe manufacturing specification . Thus, if the above values of the pipeline change at any point along the length of the pipeline, the pipeline should be segmented at this point. Northern Gateway must also provide GIS locations and names of pump stations, terminals, custody transfer meters, tunnel entrances, pipeline bridges, and block valves, as applicable. The datum must be NAD83 and projection must be geographic (latitudes and longitudes).</p>		197	198		
199	<p><b>Sunset clause</b></p> <p>Unless the NEB otherwise directs prior to <b>31 December 2016</b>, this Certificate shall expire on <b>31 December 2016</b>, unless construction of the pipeline and Kitimat Terminal has commenced by that date.</p>					199